

# Digitally Established:

Educational Resources in U.S. Higher Education, 2023

Julia E. Seaman and Jeff Seaman



Bay View Analytics®

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Educational Resources in U.S. Higher Education, 2023

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2023



Bay View Analytics

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



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Report available at <http://www.bayviewanalytics.com/oer.html>

# ACKNOWLEDGMENTS

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We'd like to thank the more than 3,000 respondents who took the time to share their insights. This project would not be possible without the faculty and administrators who completed our survey. We review every response and read every submitted comment. Some of these comments are included in this report, with permission from the respondent. Each quote is as close to the original as possible; the only changes made were to remove personally identifying information or to correct obvious typos.

The project also received great support from the open education community. We turned to members of the community for feedback and advice throughout the course of this project and thank them for helping to improve the final version.

This report would also not possible without support from our colleagues. We thank Nate Ralph for his extensive copy editing, I. Elaine Allen for feedback throughout the process, and Mark Favazza for designing the report cover.

Finally, we'd also like to thank everyone who reads this report. Your comments and feedback help guide the future of this project and are always welcome.

Julia E. Seaman  
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2023

# EXECUTIVE SUMMARY

This is the 12th report in a series of surveys tracking curricula discovery, selection, and adoption processes in U.S. higher education. Since its inception in 2009, this series has tracked a considerable shift in higher education from the traditional print textbook towards digital materials. The global COVID-19 pandemic accelerated this transition, as faculty, administrators, and institutions scrambled to transition courses and materials to accommodate remote learners.

The survey responses for this analysis were collected in April 2023, from a total of 2,483 faculty and 641 administrators. The respondents come from all 50 U.S. states and the District of Columbia.

The key takeaways from this year's survey are:

- The return to classroom and in-person instruction post pandemic continues, though a small group of faculty report they only teach blended or online courses.
- Faculty regularly incorporate a number student- and instructor-focused tools in their teaching. Every course is different however, as only textbooks, lecture slides, and online homework systems are used by more than half of faculty.
- The overall reported use of inclusive access remained steady year-over-year; approximately 25% of respondents report using inclusive access at their institutions. We suspect there may be growing confusion about what inclusive access products are, as levels of awareness decreased in the same period.
- There was a slight decline in belief amongst faculty that digital materials are as good of a learning option for students as print materials, and a strong belief that digital offers more flexibility; concerns about the cost of education for students remain high for both faculty and administrators.
- OER awareness and use grew to the highest levels ever reported, continuing the trend: in 2022-23, 2 in 3 faculty were aware of OER, and 1 in 3 faculty required OER materials in at least one course.

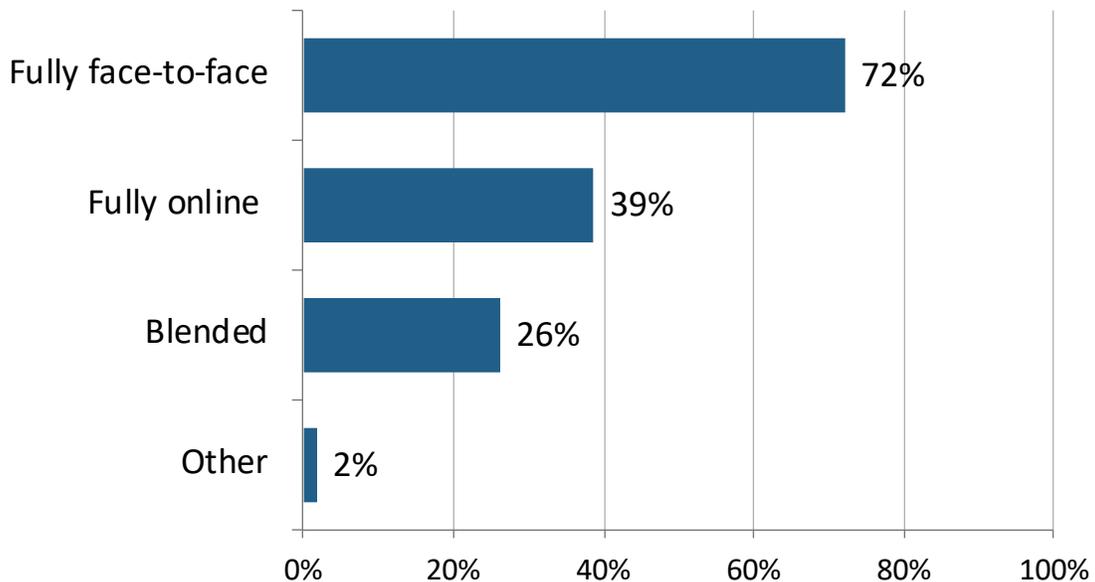
# STUDY RESULTS

## Teaching Modalities

The trend back to in-person instruction continues for 2022-23. The proportion of face-to-face courses remains lower than pre-pandemic levels, and there is a small but growing group of faculty teaching primarily online or hybrid.

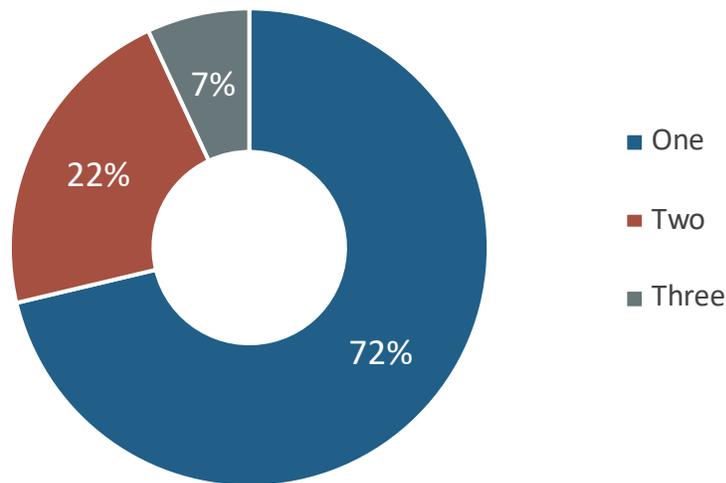
To better understand the current 2022-23 academic climate, we asked faculty to describe how they are currently teaching: face-to-face, online, a blend of in-person and remote instruction, or a mix of these options.

Faculty: Currently Teaching Course Modality  
(Select All)



The majority of faculty (72%) teach at least one course that is entirely in person. A smaller but sizable portion teach a course that is fully online (39%), while just over a quarter of faculty respondents teach blended courses, combining online and face-to-face instruction (26%).

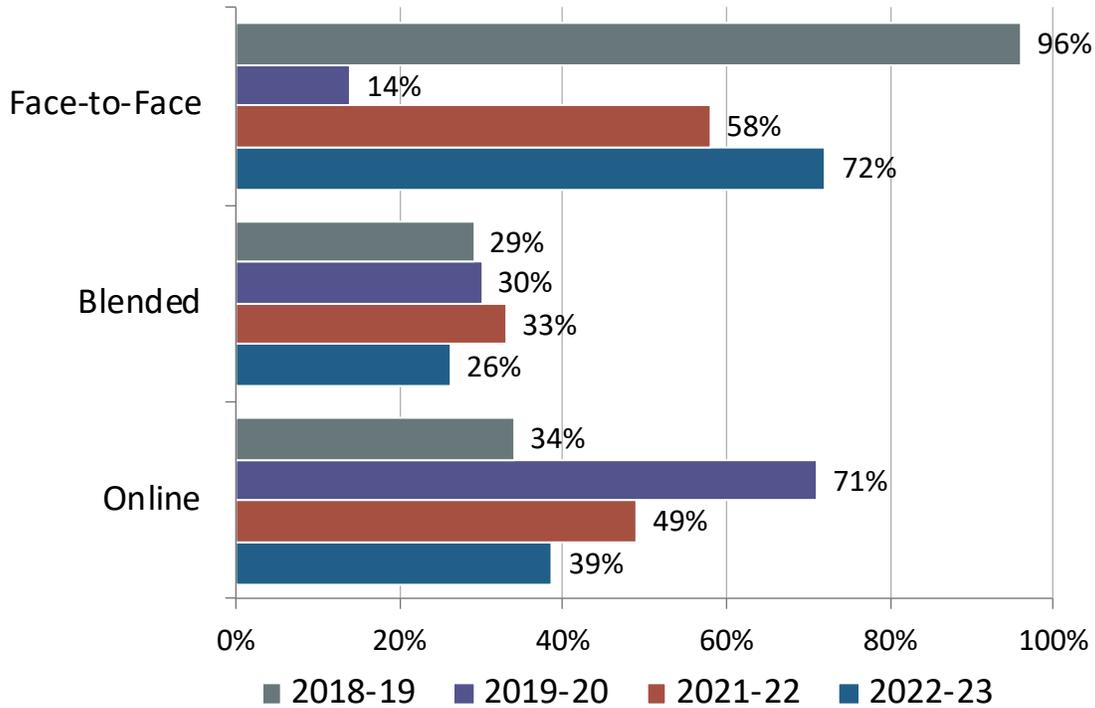
## Faculty: Number of Modalities Teaching



Faculty often teach multiple courses during a semester and can use different modes of delivery. Overall, 72% of faculty report teaching in only one modality, whether that is face-to-face, online, or blended. The largest proportion of faculty teaching in a single mode are doing so face-to-face (50% of all faculty), followed by online-only (12%), and blended (9%).

There are 22% of faculty who teach in two modes. The combination of online and face-to-face courses is most common, with 14% of all faculty reporting teaching courses in both modalities. Smaller proportions are mixed with blended: face-to-face and blended is 5%, while online and blended is 3%. Seven percent of respondents report teaching courses during the semester in all three modalities.

## Faculty: Currently Teaching Course Modality (Select All) by Year



These results suggest that the overall pattern of teaching modalities is returning to the pre-pandemic distribution. In 2018-19 nearly all (96%) of faculty were teaching one or more face-to-face courses; slightly less than two-thirds (72%) are now. That said, while the various modalities return to "normal" year-over-year, there remains a 24% difference in the number of faculty who teach at least one face-to-face course this year as compared to 2018-19. This 24% gap represents a growing group of faculty who no longer teach any in-person courses.

## Curricula Materials

The most commonly used course material remains the textbook, followed by lecture slides. In general, faculty regularly combine four different materials for use by students, but the specific items are determined by the individual teacher.

*“While I endorse collaboration, I find that when the alignment is mandated by the administration (top down), it tends to ignore input from faculty, ignore differences in student populations, impede academic freedom, and reduce innovation in favor of “alignment across campuses.”*  
-Faculty Committee Administrator

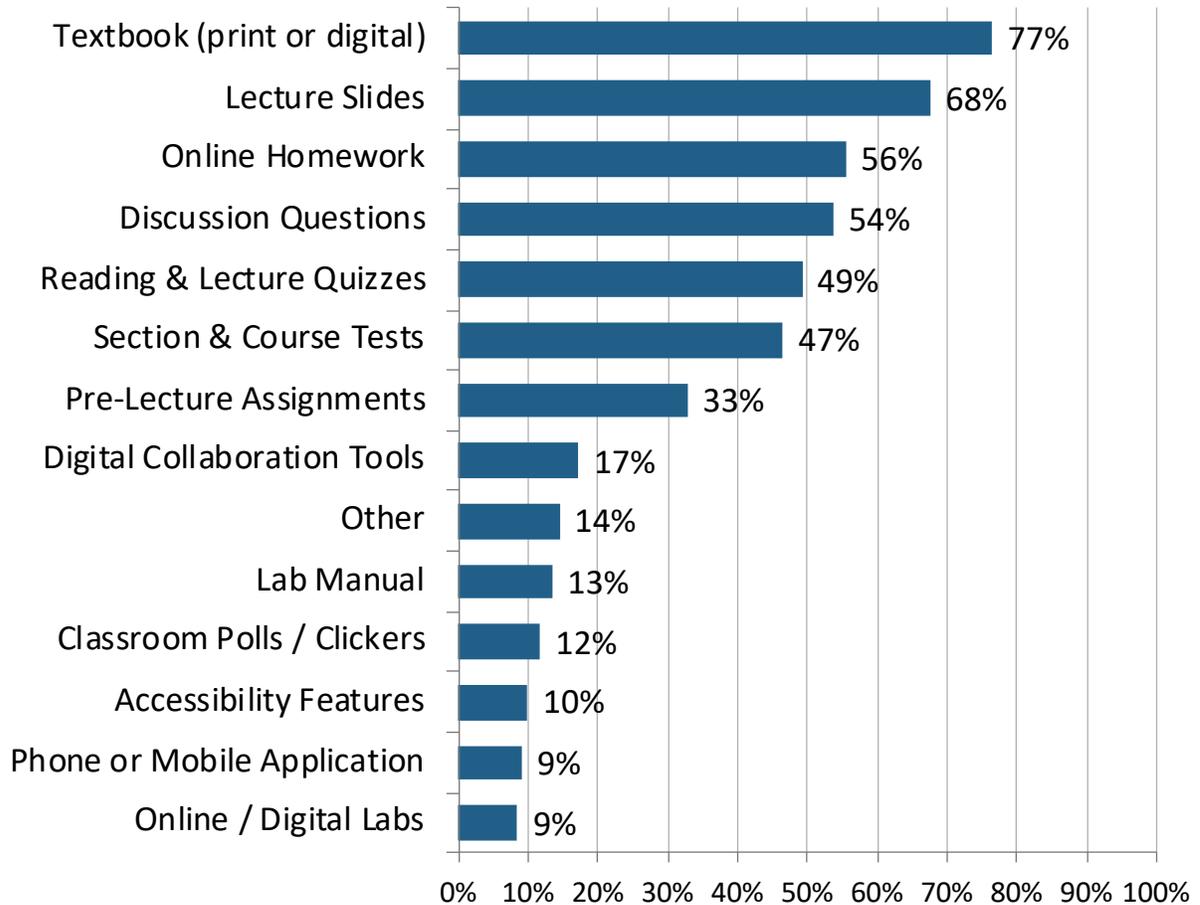
*“In my experience, when responsibility for classroom materials lies outside of the instructor, the quality of the material goes down. I’m concerned with the pressure for using open resources because of this.”*  
- Faculty Committee Administrator

*“Faculty have not been asked what will actually aid their teaching. We have been “gifted” an LMS, told to rejoice, and then told to shift our pedagogy to fit the way the LMS works.”*  
-Department Head

*“Faculty are the experts in their discipline and should have control over courseware. With that said, there has to be some consistency to create seamlessness for students.”*  
-Campus/Institution Academic Dean

*“Nobody makes materials for the kinds of topics I teach. Instead, I have a set of book chapters, journal articles, and newspaper articles that I post on the LMS. I write my own lectures, tests, assignment prompts, quizzes, worksheets, discussion questions— all of it. Whatever convenience there is in being supplied with pre-packaged curricula would be offset by how boring I would find it or my criticisms of it or the lack of ownership I’d feel in teaching it.”*  
-Advanced Social Sciences Faculty

## Faculty: Student Materials Used Regularly



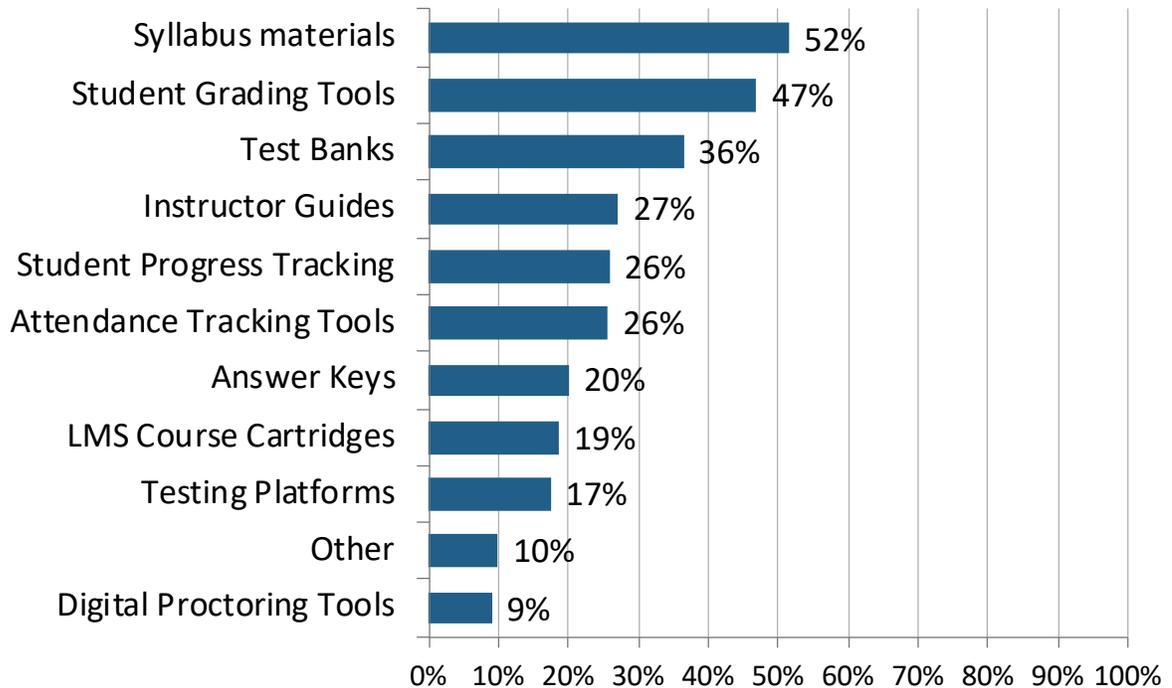
Curricula materials encompass the wide range of physical and digital materials used in courses by both the students and instructors. Faculty will tailor their material choices to fit the needs of their courses and students. When considering student materials, the most common material has been and remains the textbook. However, recent years have seen the introduction and growth of newer online and digital material options.

Faculty reported which student materials they use regularly in their courses. Faculty teaching more than one course were asked to consider only their largest enrolled course when answering the questions.

Textbooks, whether print or digital, remain the most common required course material (77%), followed by lecture slides (68%). Four other items were used regularly by around half of all faculty: online homework, discussion questions, reading and lecture quizzes, and section and course tests. Digital-specific materials that lack a print counterpart, including digital collaboration tools (17%), mobile phone applications (9%), and online or digital labs (9%), were among the least utilized.

Overall, most faculty report regularly specifying multiple curricula materials for students in their classrooms. While the specific combinations vary by faculty, the majority of faculty selected four different materials that they regularly use.

## Faculty: Instructor Materials Used Regularly



There is less agreement among faculty concerning the instructor materials that are used to prepare and deliver their courses. Syllabus materials and student grading tools are the most common, but each account for roughly half of the faculty surveyed. Other content-related materials varied in use from about a third of faculty (test banks), to a quarter (instructor guides), to a fifth (answer keys, LMS course cartridges, and testing platforms). Student tracking tools are used less commonly: around a quarter of faculty use progress monitoring and attendance tools, while just 9% of faculty use digital proctoring tools.

## Inclusive Access

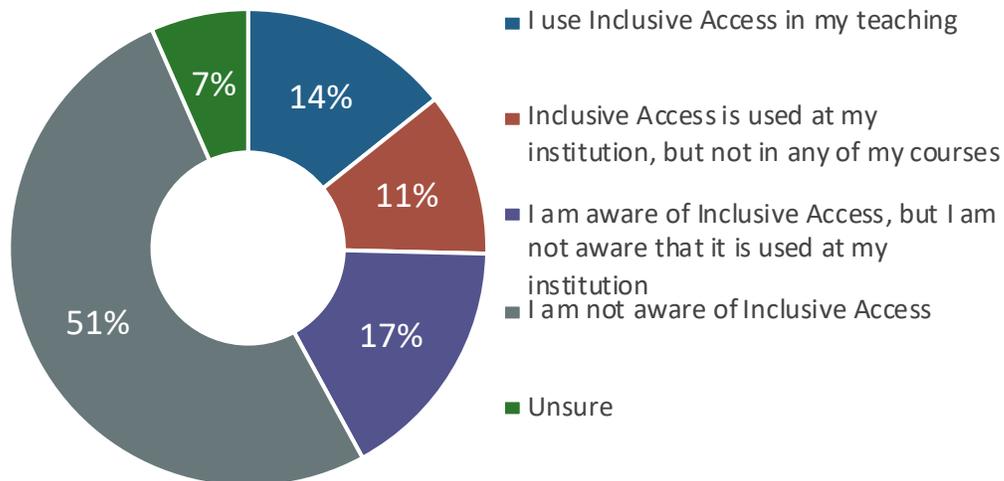
Reported inclusive access awareness slightly decreased from the 2021-22 academic year, though the reported use levels remain similar. However, there may be increased confusion around the topic.

*“Inclusive access severely limits faculty academic freedom. Many schools in NY state are moving against inclusive access contracts for that reason as well as because of the “hidden” costs to students, such as buying books/materials that are never really used in the courses.”*  
-Advanced Natural Sciences Faculty

*“Inclusive Access’ seems to be a label put on course materials to hide the cost, with the façade of equity and inclusion. Students have access to the materials on day one of the course, but in many cases, they are not paying any less than if they were to purchase the book in the traditional way.”*  
-Introductory Linguistics / Language Faculty

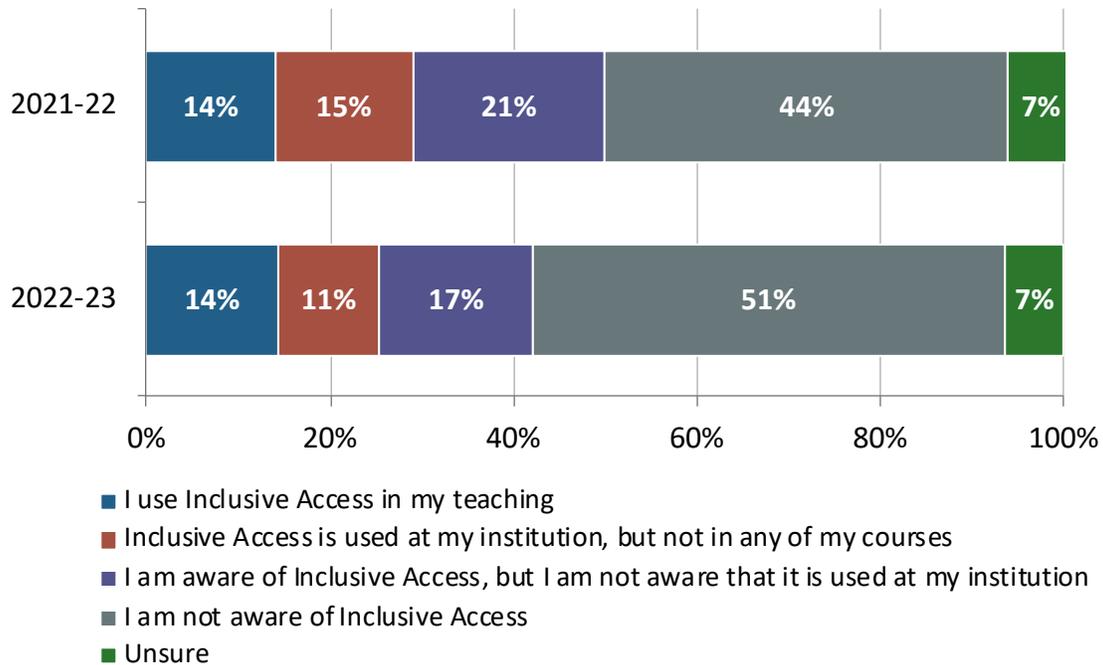
Inclusive access programs exist under a variety of names: they're known as day one access programs, automatic purchase programs, unlimited access programs, digital direct, and immediate access. Under these programs, commercial publishers provide digital access to textbooks and other classroom curricula to every student in a course, on a subscription basis.

## Faculty: Inclusive Access Awareness



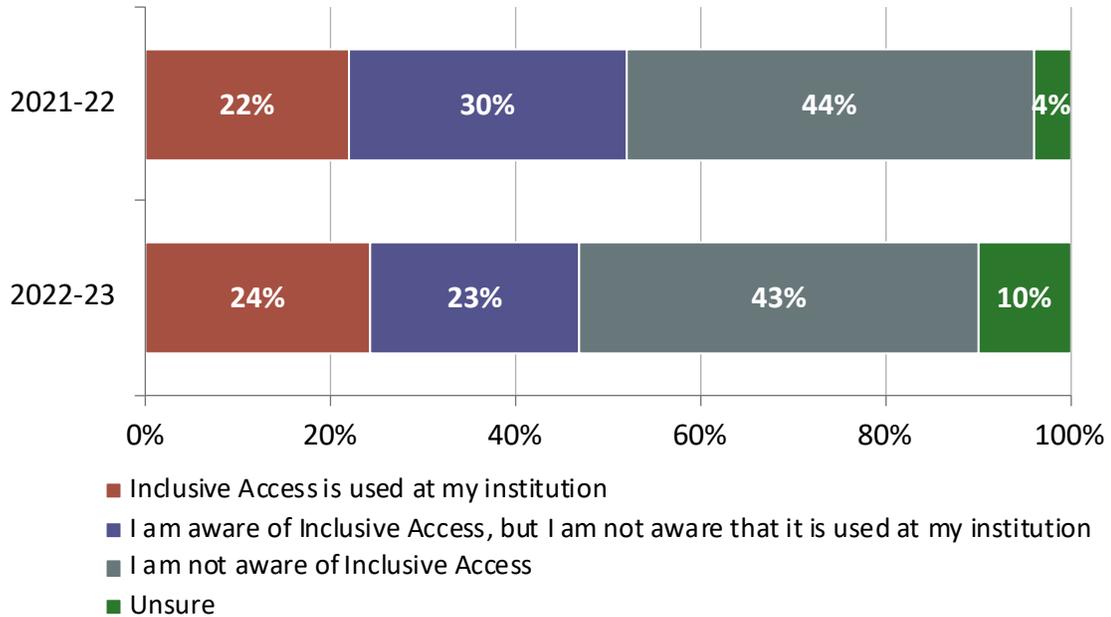
To gauge awareness of inclusive access programs, respondents provided their familiarity with the term (and related descriptors) and their own use of inclusive access programs. Over half of respondents reported that they were unaware of inclusive access. Just over a quarter (28%) of faculty say they are aware of inclusive access, but do not use it. And only 14% of faculty reported actively using inclusive access in any of their courses.

## Faculty: Inclusive Access Awareness by Year



The 2022-23 responses are similar to results from our last survey during the 2021-22 academic year. There was a small decrease in awareness of inclusive access year-over-year, from 49% of faculty having some degree of awareness of inclusive access in 2021-22, to 42% in the 2022-23 academic year. The number of faculty reporting that they employ inclusive access in one or more of their courses remained steady at 14%.

## Administrator: Inclusive Access Awareness by Year



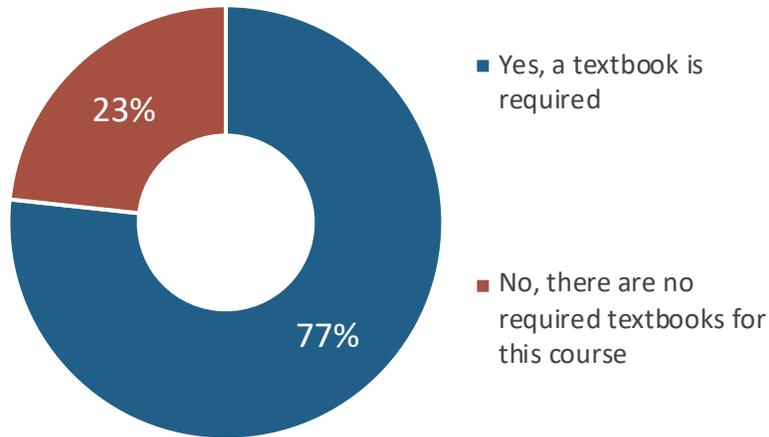
Administrators were also asked to report their awareness of inclusive access. In contrast to faculty responses, administrator responses represent a whole department or institution, not just a single course and classroom. The administrators reported a slight growth in use of inclusive access programs at their institutions, from 22% in 2021-22 to 24% in 2022-23. That said, there was an overall decrease in awareness, with more administrators reporting that they were not aware or unsure.

The confusion and subsequent reported lack of awareness and decrease in inclusive access awareness may be related to the fact there is no single inclusive access product, or even commonly used names. These programs go by many different terms – some unique to an institution – and can be acquired from many different sources. Additionally, there are newer, very similar digital products by commercial publishers, institutions, and others, adding further confusion the market.

## Textbook Formats

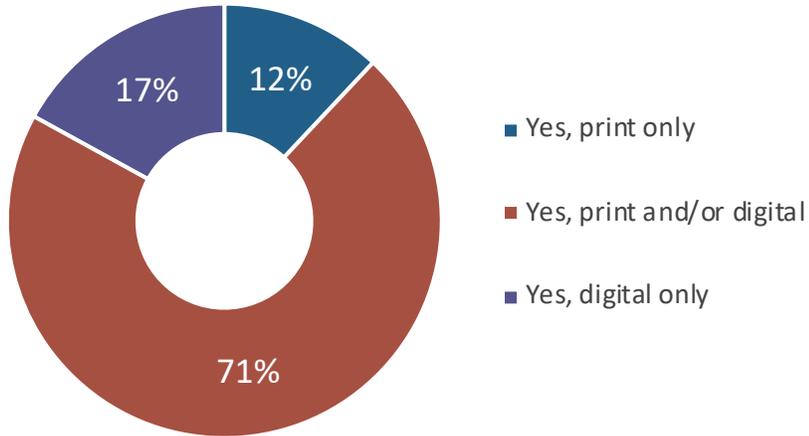
Over three-quarters of faculty require a textbook for their largest enrollment course. These textbooks are overwhelmingly offered in both physical and digital formats.

### Faculty: Course Requires a Textbook



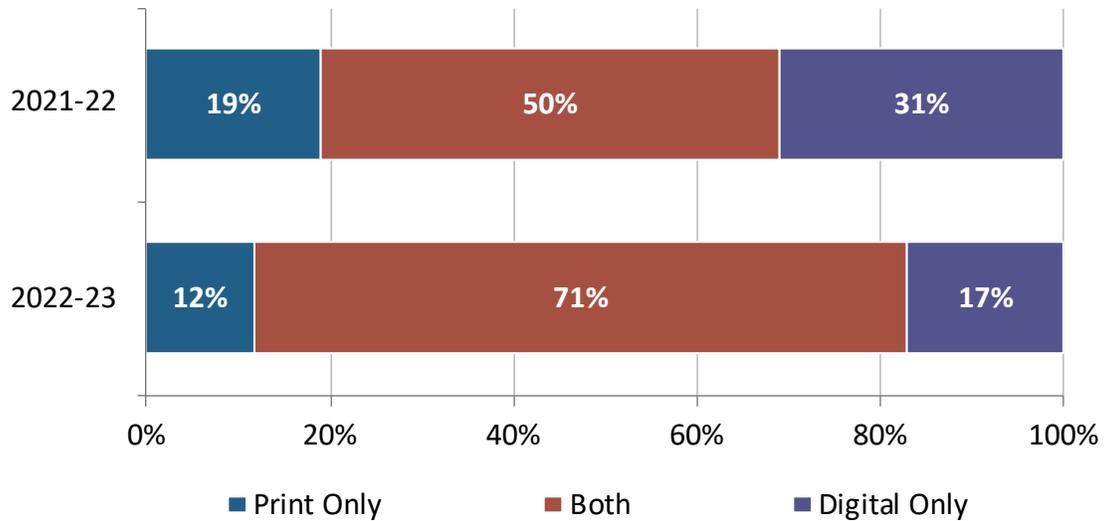
Textbooks remain the most dominant course material used in higher education. When faculty were asked what materials were required of students in their largest enrolled course, the majority (77%) stated they require a textbook.

## Faculty: Required Textbook Format



Nine out of ten courses that require textbooks make them available in a digital format. The majority of courses (71%) offer the textbook in both print and digital formats. Only a small portion offer only one format, with 12% as print only and 17% as digital only.

## Faculty: Required Textbook Format by Year



There was significant growth in the number of faculty offering students a choice of format options from 2021-22 to 2022-23. The 71% of faculty offering both options for their required textbook represents a 21% increase in choice for students year-over-year. This growth occurred at the expense of both print and digital only options. The transition could be the result of increased options from publishers, or perhaps it driven by increased demand from students and faculty to have greater flexibility when choosing materials.

## Perspectives on Digital versus Print

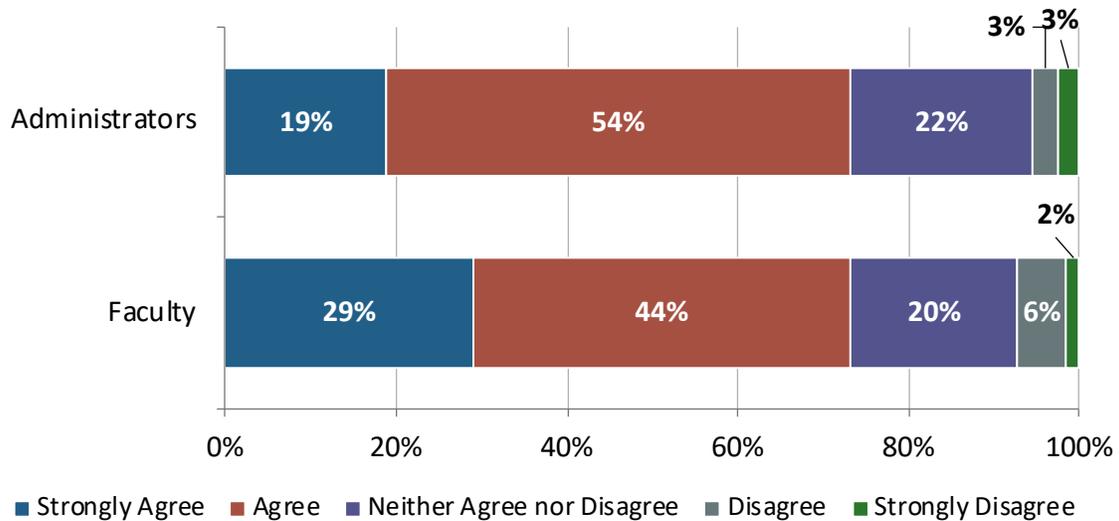
Faculty and administrators continue to prefer print materials over digital for themselves and for students. But, they agree that digital materials offer greater flexibility for students.

*“Although digital access to material helps students with savings, there's not the same level of engagement as with print material. We need to find ways to get students to engage more of their senses.”*  
-Introductory General Ed Faculty

*“I don't like the trend toward digital resources. Once the ‘rental’ period is over, my students have nothing. A book can be bought, sold, kept for referral. Digital books presently available expire.”*  
-Intermediate Engineering Faculty

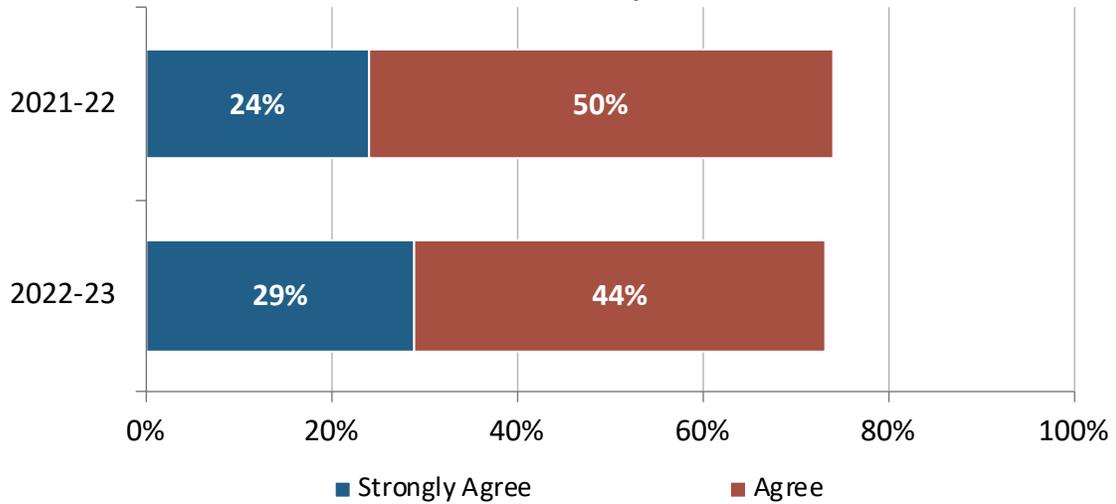
Faculty and administrators have strong opinions about digital materials in their courses. In our 2021-22 report, we noted that faculty and students were increasingly using digital materials in their higher education courses. The steady growth in the number of online courses and digital texts, coupled with the COVID-19 pandemic experience, has further increased exposure to digital materials. For the 2022-23 report, we again presented faculty and administrators with several statements to gauge their perceptions on those digital materials.

## "Digital materials provide greater flexibility for students"



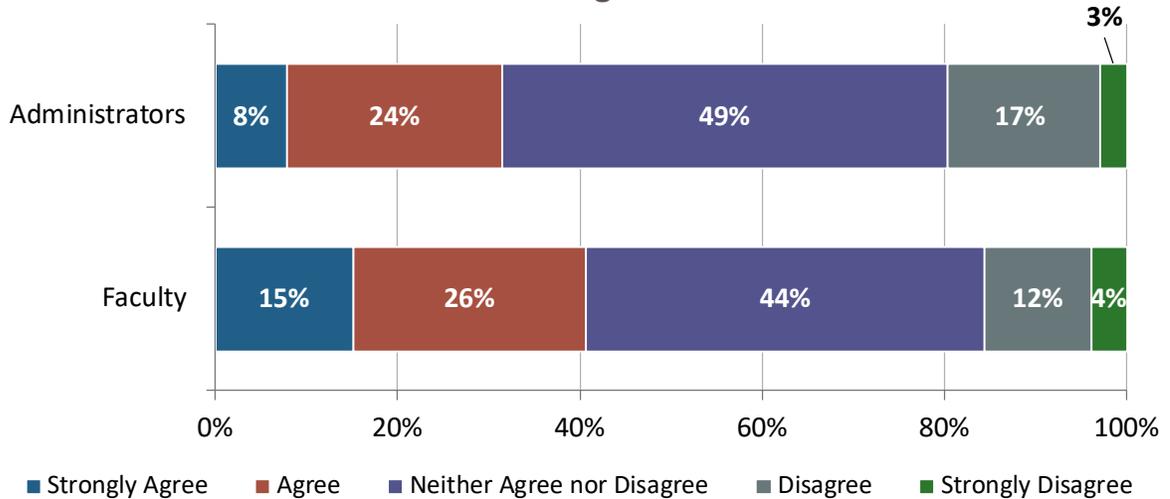
The majority of administrators and faculty agree that “digital materials provide greater flexibility” for students. Three-quarters of faculty and administrators “strongly agree” (29% and 19%, respectively) or “agree” (44% and 54%). Only a small number “disagree” at any level (8% faculty, 6% administrators).

### Faculty: "Digital materials provide greater flexibility for students" by Year



The belief that digital materials offer more flexibility for students has remained constant year-over-year (73% in 2021-22 and 74% in 2022-23), with slightly more moving from "agree" to "strongly agree."

"Students learn better from print materials than they do from digital"

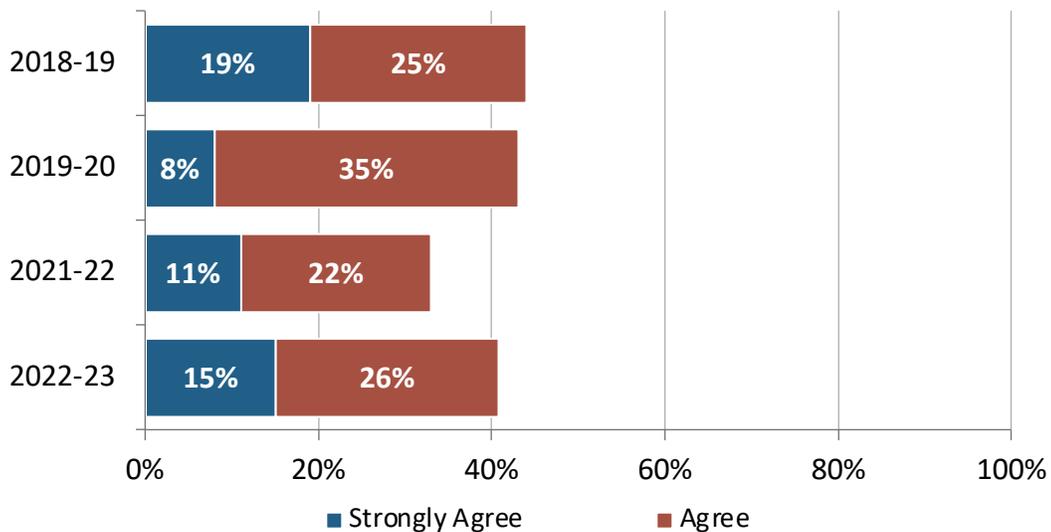


Almost a third of administrators (32%) favor print materials for student learning, saying they “agree” or “strongly agree” with the statement “Students learn better from print materials than they do from digital.” A slightly larger number of faculty respondents (41%) also favor print materials.

Administrators are also slightly more open to digital materials than faculty, with 20% stating they “somewhat disagree” or “strongly disagree” with the same statement. Just 16% of faculty fit into the disagreement cohort.

While this does indicate that the preference for print is still larger, the largest group of respondents from both the faculty and administrator segments responded that they “neither agree or disagree” with the statement: 49% of administrators, and 44% of faculty.

### Faculty: "Students learn better from print materials than they do from digital" by Year



This project has tracked this sentiment over multiple years to gauge the evolution of preferences on print versus digital materials. There has been a slow shift in preference over the years amongst faculty, with the number of faculty who believe that students learn better from print declining a bit over time from 44% in 2018-19 to the current 41%. However, there was a small rebound this year from the pro-digital, post-pandemic perspective, especially with the number of faculty who “strongly agree.”

Faculty shared many details about their perspectives through direct comments. Faculty who support digital highlight that digital materials can be more flexible, are updated much more readily than print, and can be accessed anytime. Print supporters highlight the quality of materials not easily found in digital materials and the ability to keep their classrooms free of digital distractions. Administrators echoed the opinion about screens, as one recurring theme is that “having a lot of screens” is detrimental to the learning experience. Faculty also note that rural and economically disadvantaged populations can have trouble accessing digital tools and materials when they're not on campus, and the costs associated with printing all of their digital materials might outweigh any savings.

## Cost Factor

Large majorities of faculty and administrators agree that cost of materials is a serious problem for students, though showing a small decline from 2021-22 perceptions.

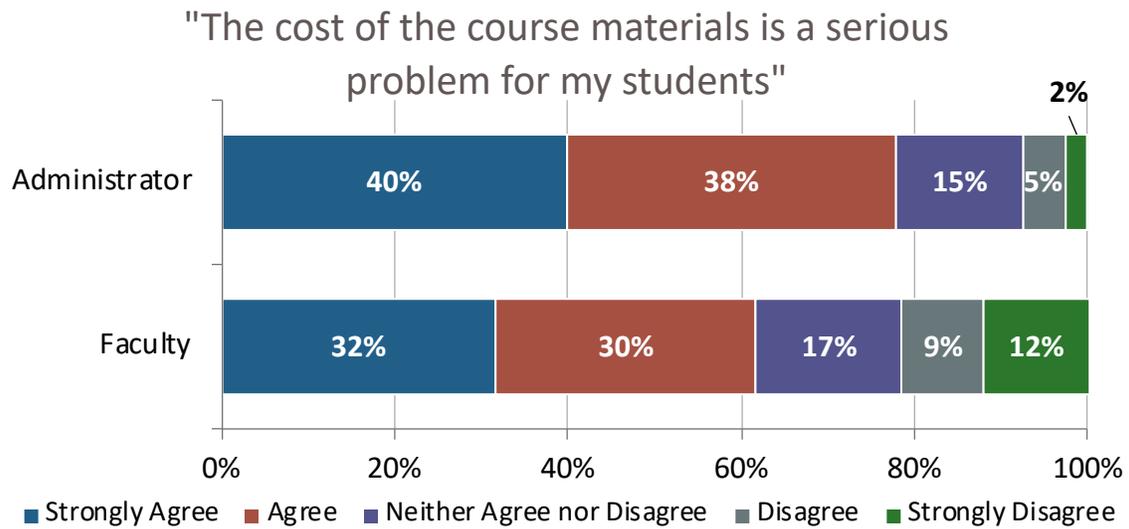
*“I feel like instructors are stuck in such a difficult position. We want fairly priced materials, but so much of the OER currently available are not quality. Well-developed textbooks are incredibly expensive — sometimes to the point that students will not buy them.”*  
-Advanced Humanities Faculty

*“I worry that the digitization of classroom materials may make it harder for students who do not have the money to purchase those materials. For example, in my class, you need to subscribe to the textbook to even be able to take examinations.”*  
-Introductory Psychology Faculty

*“I always want to help our students save money on course related items. If the quality of open access textbooks was on par with the for profit publisher I currently use I'd use the open access material in a heartbeat!”*  
-Advanced Natural Sciences Faculty

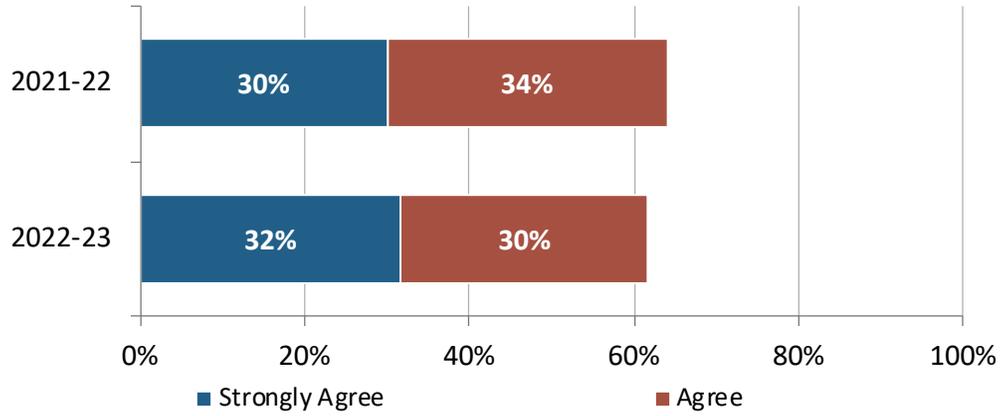
*“Textbook costs limit students' ability to succeed and even access courses. They need to be eliminated if we want to level the playing field for students from all economic backgrounds.”*  
-Introductory Mathematics / Statistics Faculty

The costs that students incur has become an important factor for administrators and faculty when selecting materials for their courses. This sentiment persists, as a majority of both administrators and faculty agreeing that costs are a serious problem.

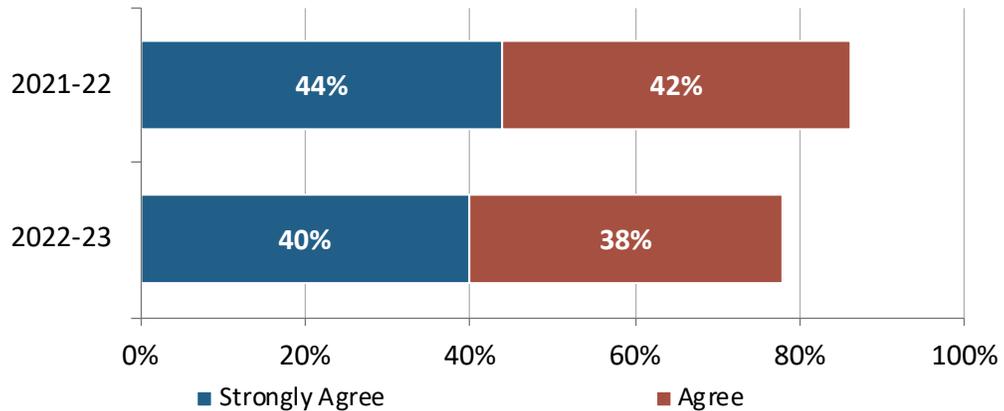


Administrators express greater concern with the cost to student than faculty members, with 78% of administrators selecting “agree” or “strongly agree” with the statement, as compared to 62% of faculty. Similarly, just 7% of administrators “disagree” or “strongly disagree” with the statement, as compared to 21% of faculty.

Faculty: "The cost of the course materials is a serious problem for my students" by Year



Administrator: "The cost of the course materials is a serious problem for my students" by Year



The levels of agreement from both faculty and administrators haven't changed substantially year-over-year, though the degree of agreement has declined slightly for both groups. The number who "agree" or "strongly agree" that costs are a serious problem fell by 2% among faculty, and by 8% among administrators.

## Curricula Satisfaction

About half of faculty give their curricula good ratings, while the other half range from “just ok” to failing grades.

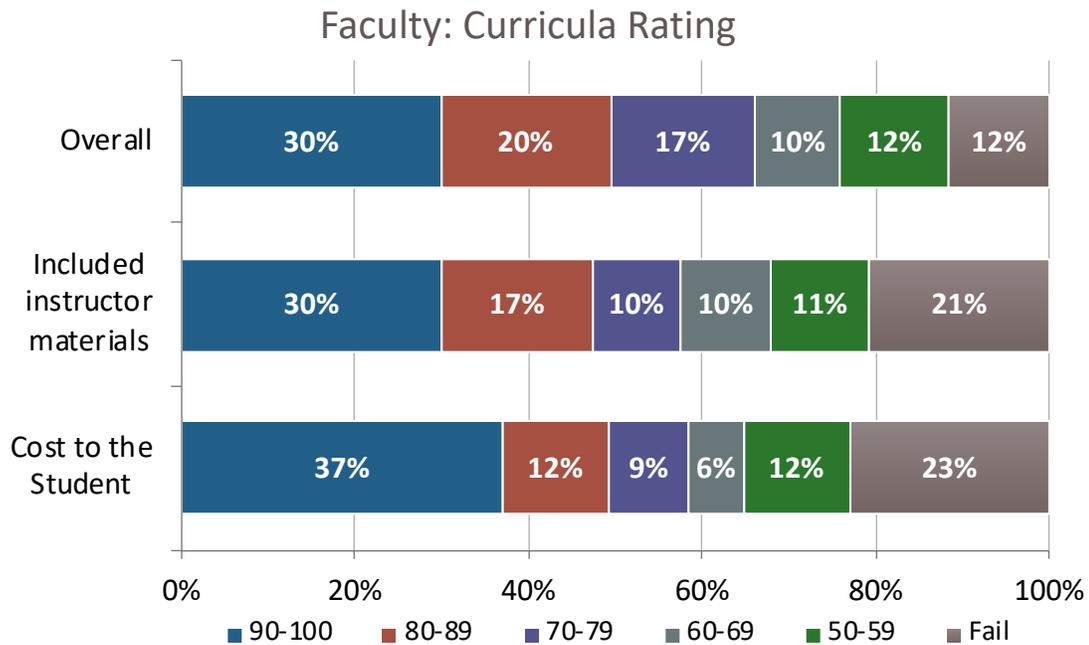
*“We really need to rethink the use of textbooks and learning resources. We need materials that help us challenge our students to think, explore and challenge. I only use a textbook in one of my courses, and then only because the school requires it. We need to help students learn to explore, discover and think critically. The textbooks I have used feel like they get in the way of those processes more than they help.”*  
-Advanced Business Administration Faculty

*“I choose high-quality textbooks, with an eye toward cost. I have generally been happy with my choices.”*  
-Graduate Mathematics / Statistics Faculty

*“Moderately effective. All work well for students who regularly attend class and try to stay caught up on homework.”*  
-Intermediate Mathematics / Statistics Faculty

*“It's fine. Honestly, half the students don't even buy the book.”*  
-Introductory General Ed Faculty

Faculty were asked to rate their satisfaction with their course curricula for their largest enrollment classes across multiple metrics, using a 0 – 100 scale. Scores under 50 were designated as failing grades for the course curricula.

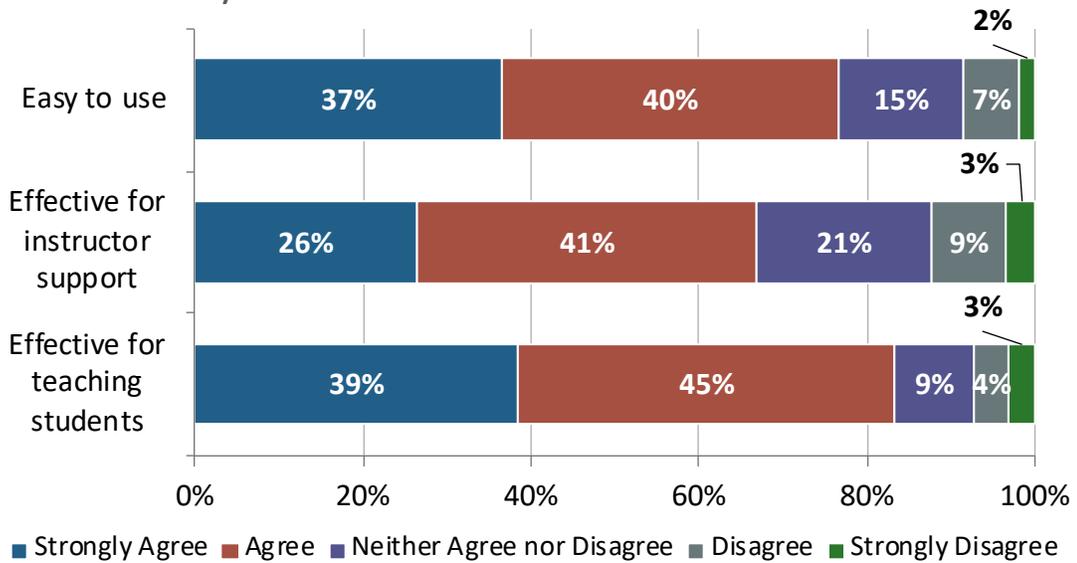


In general, faculty are satisfied with their course curricula. Half of all faculty give their course curricula an overall grade over 80, with 30% giving the equivalent of an A grade (90 or greater). Though not all faculty are highly satisfied. Thirty-nine percent of faculty gave scores from 50 to 79, indicating their course materials were serviceable, if not great. A small but significant group of faculty (12%) rate their curricula with an overall failing grade, below 50.

Faculty ratings for specific components of their curricula trended lower. While roughly 50% of faculty give high grades above 80, there were fewer grades in the 90s for “included instructor materials” or “cost to the student.” Almost double the number of faculty gave failing grades for these elements, with 21% assigning a failing grade to “included instructor materials” and 23% assigning a failing grade to “cost to the student.”

The overall picture is one of general satisfaction among faculty with their course materials. But there is room for improvement to bring faculty opinions from average or failing ratings to high scores.

Faculty: "The courseware materials I use are..."



Faculty are less negative when asked to gauge their opinions on the ease of use and effectiveness of their courseware materials. Respondents are, overall, generally satisfied with their materials they use: 77% of respondents report that their materials are easy to use, 67% find their materials effective for instructor support, and 84% agree that the materials they use are effective for teaching their students.

## OER Awareness

The 2022-23 results on OER awareness rise to the highest level measured – 64%. This annual growth trend has been ongoing for almost a decade.

*“I use open-source materials and have for the past 10 years in two upper-level courses. But other than some librarians, no one has encouraged or advocated for this kind of shift at our school.”*  
-Department Head

*“The biggest challenge we've had with implementing more OER is faculty resistance both out of misperceptions about quality and unwillingness to overhaul their course with a new resource.”*  
-Campus/Institution Academic Dean

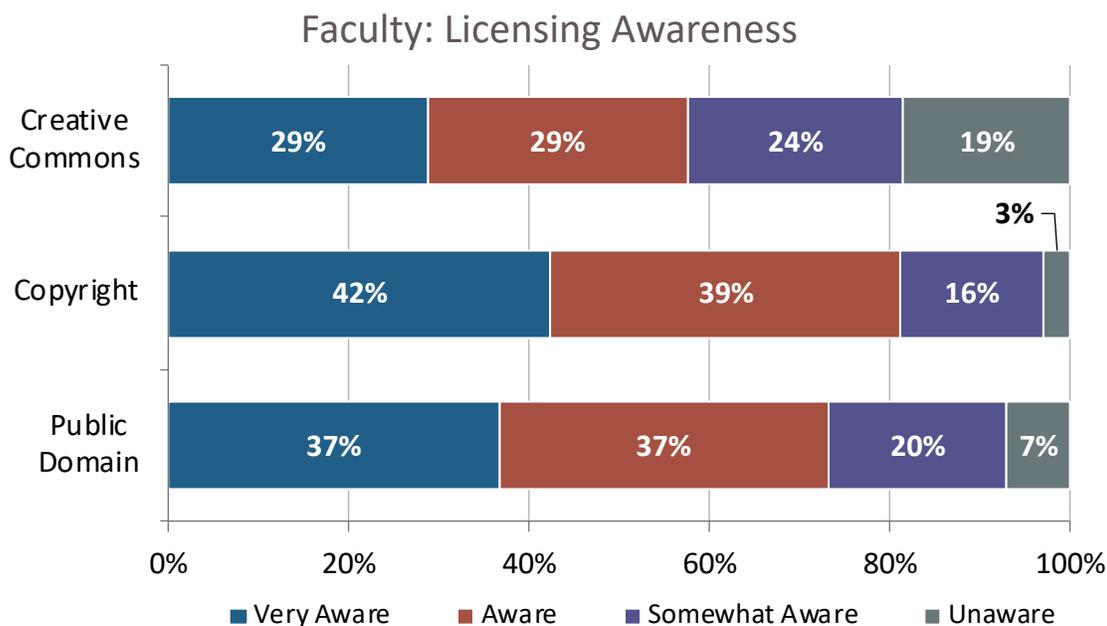
*“OER searches seem cumbersome and overwhelming.”*  
-Department Head

*“I am a big proponent of OERs, not only because they're less expensive for students, but you can also pick and choose material easily among various authors. I haven't used a textbook in any of my classes in the past three years.”*  
-Graduate Business Administration Faculty

*“With OER becoming more readily available, the path forward is clear. Our faculty are adept, have good teaching experience, and are well versed in second language pedagogy; we will develop our own materials with the support of our institution and will save our students collectively over \$25,000/ semester.”*  
-Introductory Linguistics / Language Faculty

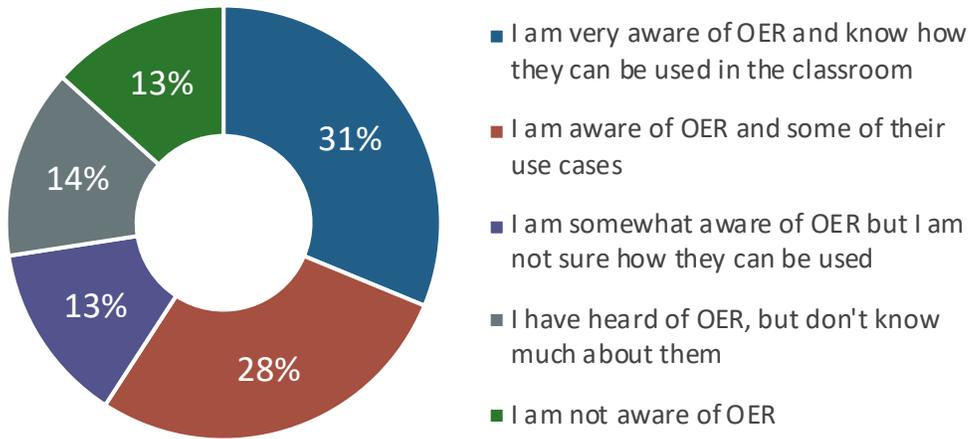
Measuring awareness of open educational resources (OER) can be complicated. Many faculty are not aware of specific details and definitions for licensing that are key aspects of OER, even as they make use of them. Some may confuse “open” with “free,” and assume all free resources are OER. To address this issue, this research has used a combination of OER awareness and licensing awareness to create a strict measure of OER awareness to account for imprecise knowledge and add additional confidence to our measurement.

To gauge awareness of OER and licensing, reports in this series use a consistent set of questions which have struck a balance between differentiating among the varying levels of awareness, without leading those with no previous knowledge of the concept. This specific wording has remained consistent to support year-to-year comparisons to the earlier surveys.



There are high levels of awareness for all licensing types amongst higher education faculty. Ninety-seven percent of faculty are at least “somewhat aware” of copyright, and 94% are at least “somewhat aware” of public domain licensing. Awareness of Creative Commons licensing is just over 80%. Over 50% of respondents are “aware” or “very aware” of all three types of licenses, indicating faculty are confident in their own awareness levels.

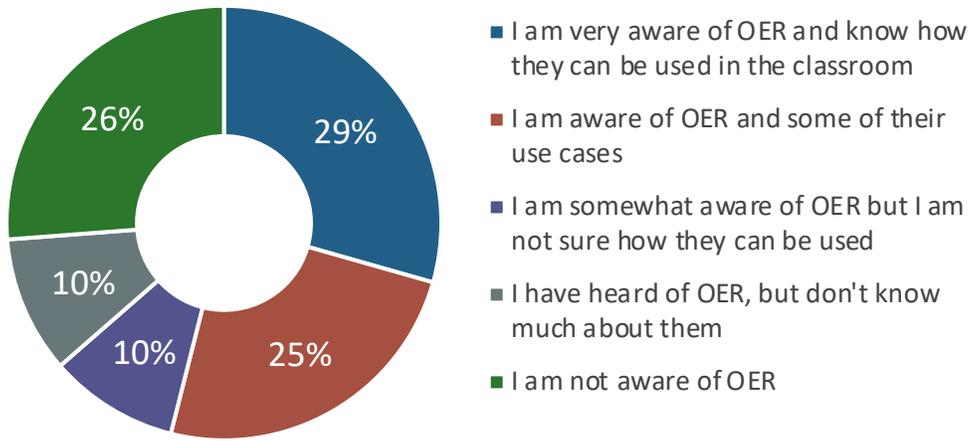
## Faculty: OER Awareness



The 2022-23 survey results also showed high levels of awareness of OER. Seventy-two percent of faculty have some level of awareness of OER, with 59% saying that are “aware” or “very aware,” and 13% saying they are “somewhat aware.” Only 13% of faculty said they are “not aware” of OER.

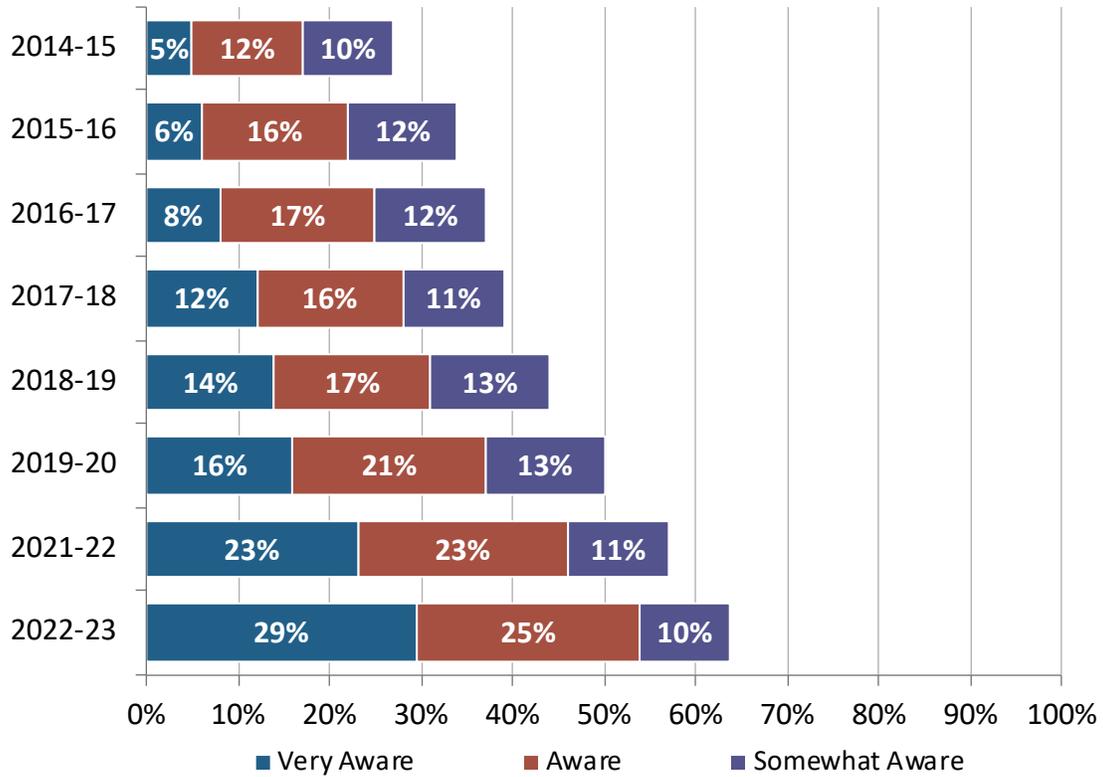
However, because many respondents can confuse OER with “free” or “open source,” these reports have used an improved indicator of awareness that combines awareness of the term OER and awareness of licensing. Respondents who report that they are unaware of Creative Commons licensing are removed from the “aware” categories, creating a stricter index of OER awareness that includes only those who are aware of both the term and the type of licensing that goes along with it.

## Faculty: OER Awareness (Strict)



The level of OER awareness decreases when using this stricter definition. The number of faculty who are unaware of both OER and Creative Commons licensing doubles to 26%. However, the awareness levels for those who are “aware” (25%) and “very aware” (29%) are close to the non-strict definition awareness, indicating these faculty accurately know what OER is.

Faculty: OER Awareness (Strict) by Year



All told, OER awareness continues to grow year-over-year. There was a 7% increase during the 2022-23 academic year, reaching the highest level of OER awareness (64%) seen in the data. For 2022-23, more faculty are aware of OER, and those that are aware are more confident in their awareness, than any earlier year.

## OER Use

OER use, like OER awareness, continues to rise. In 2022-23, 1 in 2 faculty used OER materials, and about 1 in 3 faculty required an OER material in at least one course.

*“I prefer OER simply because of cost, convenience, and being able to pick more of what I want to use and think students will enjoy. However, technology is not without its problems.”*  
-Introductory Arts and Literature Faculty

*“I’m concerned that the discussion surrounding open resources focus exclusively on cost and never on quality of the materials. I fear that students will end up with free resources that are of lower quality.”*  
-Faculty Committee Administrator

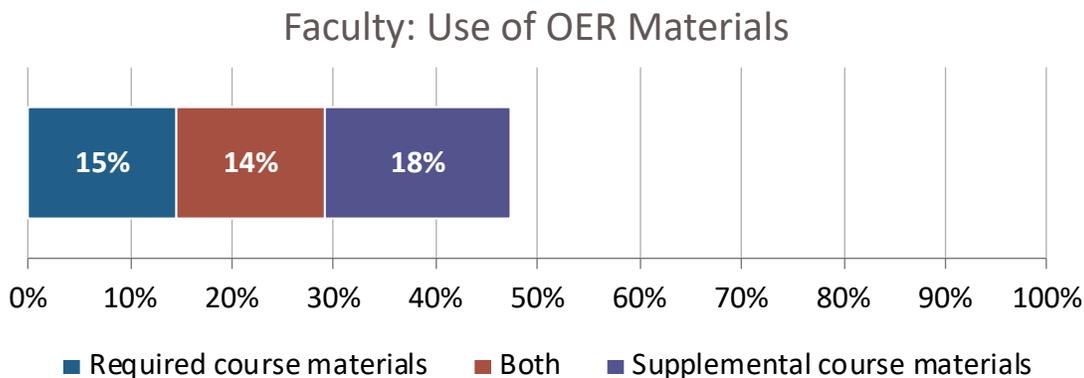
*“While OER probably works fine for some course, it does not work for science, health science or several other fields. We will be doing a serious disservice to our students and to higher education as a whole to force this upon faculty.”*  
-Department Head

*“I have found that OER have more adaptability and can be more student directed than an overall required textbook, i.e., ‘one size does not always fit all.’”*  
-Introductory Arts and Literature Faculty

*“I have moved completely away from required textbooks-for-purchase, digital or otherwise, and utilize OER, or PDFs provided under copyright observation and fair use laws. Doing so has reduced my course costs to \$0 for students. This strategy also grants greater flexibility in what I can assign to students.”*  
-Graduate Arts and Literature Faculty

*“OER materials available for my discipline are low quality and unusable. My institution offered a tiny stipend to faculty to develop and share open-access course materials, but it was not even remotely worth the sacrifice of summer/research time and the dozens of hours of indoctrination/workshops that were required. For now, I strongly prefer print textbooks, even though they are overpriced.”*  
-Introductory Humanities Faculty

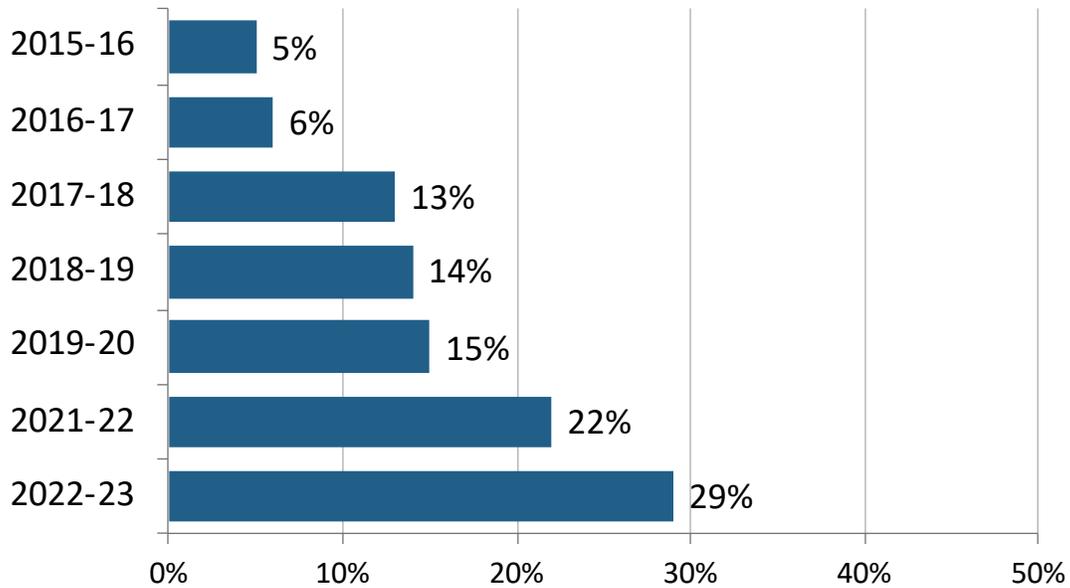
Awareness of a curricula option is just the first step in the process of adopting and using a product. We also asked faculty about their use of OER materials across their classrooms to compare to the OER awareness trends.



Forty-seven percent of faculty respondents report using OER materials as either required or supplemental course materials, or both. Fifteen percent of faculty required OER materials, 18% used them as supplementary materials, and 14% used both. These OER materials can be any type of resource — they aren't limited to textbooks.

It is important to note that these responses are by individual faculty, and not by course: faculty can teach multiple courses and use OER in only one or across all for this question.

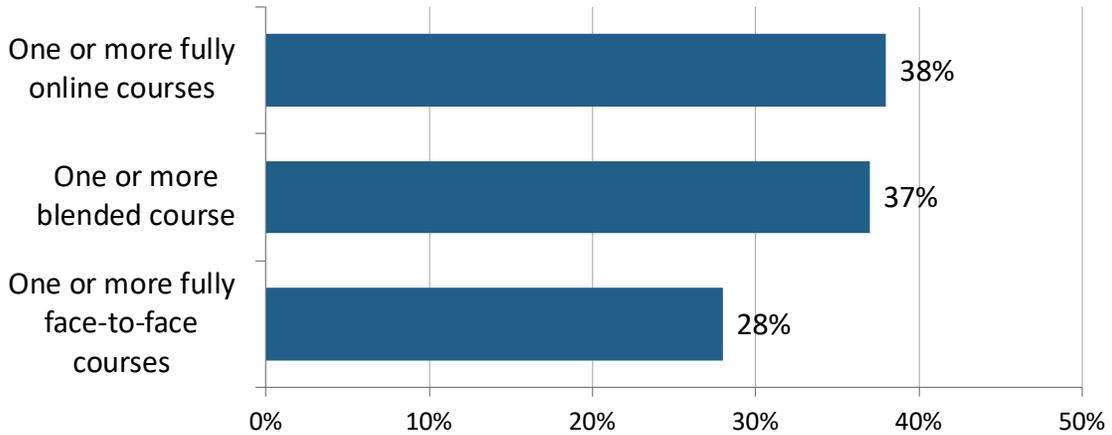
### Faculty: Use of Required OER Materials by Year



Reported levels of OER use increased 7% in the 2022-23 academic year, mirroring the OER awareness growth. Additionally, the use of OER as a required materials by faculty is at a similar level to faculty who are “very aware” of OER (29%).

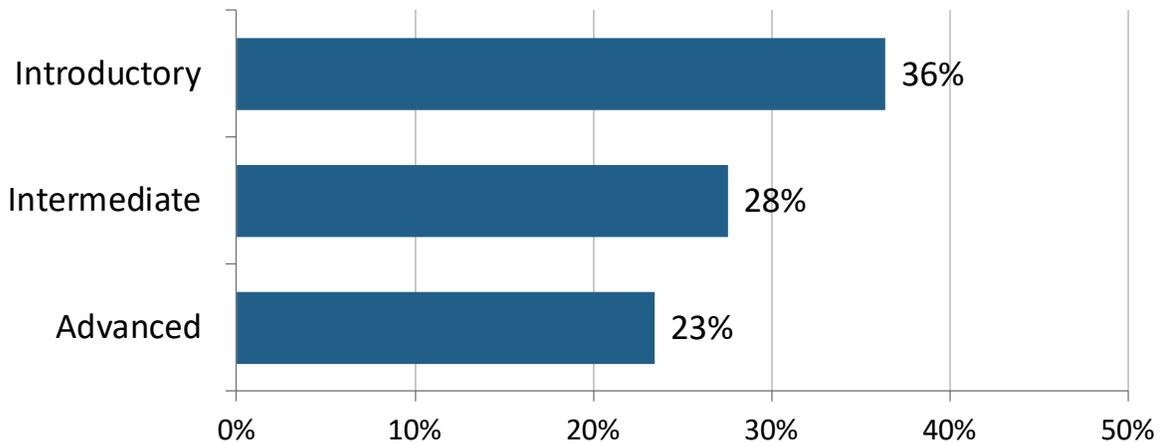
The increase in use continues even as teachers are returning to in-person instruction, and the growth in OER awareness and use seems to be continuing to grow, even beyond the initial pandemic introduction to digital materials.

### Faculty: Required OER Course Materials by Teaching Modality



There are some attributes that are associated with OER adoption. The use of OER as required in a course is more common with faculty who report that they teach at least one course fully online or blended. It is almost 10% higher than faculty who only teach face-to-face courses.

### Faculty: Required OER Course Materials by Course Level



OER materials are also more commonly used as required materials in introductory level courses. OER use decreases as course level increases: there is a 13% difference in use from introductory courses and advanced courses, and an 8% difference in use from introductory courses and intermediate courses.

# SUMMARY

Digital materials have become entrenched in higher education classrooms, despite a return to face-to-face instruction and a general stated preference for printed materials. The most commonly used digital materials are replacements for physical media, though a small number of faculty are implementing digital materials that may not have a physical counterpart, like digital collaboration tools or tools to monitor student progress.

OER awareness and use has increased to the highest levels we've ever recorded. There are many potential factors influencing this rise. Faculty and administrators remain concerned about the cost of materials for students, an area OER excels in as a free or low-cost option. Faculty are also much more comfortable finding and using digital curricula following their pandemic experiences. Multiple additional factors, like institution- or state-based initiatives and growing familiarity with OER publishers such as OpenStax, likely also support this growth.

Faculty remain individuals, with unique requirements for their course content and materials. The switch to digital materials continues to grow year over year, but there are a small but sizable group who do not like or do not want digital materials. There are many reasons cited against digital materials – student or faculty preference, course subjects that aren't conducive to digital, access and accessibility reasons, and more. Though, this year, we are seeing the rise of a group of faculty who are becoming digital-only teachers, often citing the similar reasons as the physical-only faculty. Nevertheless, preferences in higher education courses remain varied even as education evolves in the face of a new digital paradigm.

## Next Steps

What new digital materials will be adopted and supplant physical ones? How will an increase in digital tools (with their benefits and issues) change teaching? Can OER awareness continue to grow, or has it hit a limit? How will commercial publishers compete with OER? Our future research will aim to answer these questions and more on curricula adoption and implementation for higher education.

# METHODOLOGY

This survey was conducted in April 2023, with a total of 2,483 faculty and 641 administrators. The respondents come from all 50 states and the District of Columbia.

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>1</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 2,483 faculty and 641 administrators 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). Respondents represent 1,427 different institutions from all fifty states and the District of Columbia.

Institutional descriptive data come from the National Center for Educational Statistics' IPEDS database.<sup>2</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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1 <http://schooldata.com/wordpress/wp-content/uploads/2014/06/MDR-Education-Catalog.pdf>

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

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.

# 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.

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>3</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.

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*

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<sup>3</sup> <http://www.hewlett.org/programs/education-program/open-educational-resources>.

*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>4</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>5</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>6</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>7</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>8</sup>

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>9</sup>

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<sup>4</sup> <http://www.copyright.gov/help/faq/definitions.html>

<sup>5</sup> <http://legal-dictionary.thefreedictionary.com/copyright>

<sup>6</sup> <https://creativecommons.org/publicdomain/zero/1.0/>

<sup>7</sup> <http://whatis.techtarget.com/definition/public-domain>

<sup>8</sup> Personal communication from Cable Green, Ph.D., Director of Open Education, Creative Commons

<sup>9</sup> State of the Commons report: <https://stateof.creativecommons.org>

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>10</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>11</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.

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<sup>10</sup> <https://openstax.org/blog/giving-inclusive-access-second-look>

<sup>11</sup> <https://www.mheducation.com/highered/inclusive-access.html>

# APPENDIX TABLES

## Teaching Modalities

### Faculty: Currently Teaching Course Modality (Select All)

A fully face-to-face course	72%
A fully online course	39%
A course that combines online and face-to-face instruction	26%
Other	2%

### Faculty: Number of Modalities Teaching

One	72%
Two	22%
Three	7%

### Faculty: Currently Teaching Course Modality (Select All) by Year

	2022-23	2021-22	2019-20	2018-19
Face-to-face	72%	58%	14%	96%
Blended	26%	33%	30%	29%
Online	39%	49%	71%	34%

## Curricula Materials

### Faculty: Student Materials Used Regularly

Textbook (print or digital)	77%
Lecture Slides	68%
Online Homework	56%
Discussion Questions	54%
Reading & Lecture Quizzes	49%
Section & Course Tests	47%
Pre-Lecture Assignments	33%
Digital Collaboration Tools	17%
Other	14%
Lab Manual	13%
Classroom Polls / Clickers	12%
Accessibility Features	10%
Phone or Mobile Application	9%
Online / Digital Labs	9%

### Faculty: Instructor Materials Used Regularly

Syllabus materials	52%
Student Grading Tools	47%
Test Banks	36%
Instructor Guides	27%
Student Progress Tracking	26%
Attendance Tracking Tools	26%
Answer Keys	20%
LMS Course Cartridges	19%
Testing Platforms	17%
Other	10%
Digital Proctoring Tools	9%

## Inclusive Access

### Faculty: Inclusive Access Awareness

I use Inclusive Access in my teaching	14%
Inclusive Access is used at my institution, but not in any of my courses	11%
I am aware of Inclusive Access, but I am not aware that it is used at my institution	17%
I am not aware of Inclusive Access	51%
Unsure	7%

### Faculty: Inclusive Access Awareness by Year

	2022-23	2021-22
I use Inclusive Access in my teaching	14%	14%
Inclusive Access is used at my institution, but not in any of my courses	11%	15%
I am aware of Inclusive Access, but I am not aware that it is used at my institution	17%	21%
I am not aware of Inclusive Access	51%	44%
Unsure	7%	7%

### Administrator: Inclusive Access Awareness by Year

	2022-23	2021-22
Inclusive Access is used at my institution	24%	22%
I am aware of Inclusive Access, but I am not aware that it is used at my institution	23%	30%
I am not aware of Inclusive Access	43%	44%
Unsure	10%	4%

## Textbook Formats

### Faculty: Course Requires a Textbook

Yes, a textbook is required	77%
No, there are no required textbooks for this course	23%

### Faculty: Required Textbook Format

Yes, print only	12%
Yes, print and/or digital	71%
Yes, digital only	17%

### Faculty: Required Textbook Format by Year

	2022-23	2021-22
Print Only	12%	19%
Both	71%	50%
Digital Only	17%	31%

## Perspectives on Digital versus Print

### "Digital materials provide greater flexibility for students"

	Faculty	Administrators
Strongly Agree	29%	19%
Agree	44%	54%
Neither Agree nor Disagree	20%	22%
Disagree	6%	3%
Strongly Disagree	2%	3%

### Faculty: "Digital materials provide greater flexibility for students" by Year

	2022-23	2021-22
Strongly Agree	29%	24%
Agree	44%	50%

### "Students learn better from print materials than they do from digital"

	Faculty	Administrators
Strongly Agree	15%	8%
Agree	26%	24%
Neither Agree nor Disagree	44%	49%
Disagree	12%	17%
Strongly Disagree	4%	3%

### Faculty: "Students learn better from print materials than they do from digital" by Year

	2022-23	2021-22	2019-20	2018-19
Strongly Agree	15%	11%	8%	19%
Agree	26%	22%	35%	25%

## Cost Factor

### "The Cost of the course materials is a serious problem for my students"

	Faculty	Administrator
Strongly Agree	32%	40%
Agree	30%	38%
Neither Agree nor Disagree	17%	15%
Disagree	9%	5%
Strongly Disagree	12%	2%

### Faculty: "The cost of the course materials is a serious problem for my students" by Year

	2022-23	2021-22
Strongly Agree	32%	30%
Agree	30%	34%

### Administrator: "The cost of the course materials is a serious problem for my students" by Year

	2022-23	2021-22
Strongly Agree	40%	44%
Agree	38%	42%

## Curricula Satisfaction

Faculty: Curricula Rating			
	Cost to the Student	Included instructor materials	Overall
90-100	37%	30%	30%
80-89	12%	17%	20%
70-79	9%	10%	17%
60-69	6%	10%	10%
50-59	12%	11%	12%
Fail	23%	21%	12%

Faculty: "The courseware materials I use are..."			
	Effective for teaching students	Effective for instructor support	Easy to use
Strongly Agree	39%	26%	37%
Agree	45%	41%	40%
Neither Agree nor Disagree	9%	21%	15%
Disagree	4%	9%	7%
Strongly Disagree	3%	3%	2%

## OER Awareness

### Faculty: Licensing Awareness

	Public Domain	Copyright	Creative Commons
Very Aware	37%	42%	29%
Aware	37%	39%	29%
Somewhat Aware	20%	16%	24%
Unaware	7%	3%	19%

### Faculty: OER Awareness

I am very aware of OER and know how they can be used in the classroom	31%
I am aware of OER and some of their use cases	28%
I am somewhat aware of OER but I am not sure how they can be used	13%
I have heard of OER, but don't know much about them	14%
I am not aware of OER	13%

### Faculty: OER Awareness (Strict)

I am very aware of OER and know how they can be used in the classroom	29%
I am aware of OER and some of their use cases	25%
I am somewhat aware of OER but I am not sure how they can be used	10%
I have heard of OER, but don't know much about them	10%
I am not aware of OER	26%

### Faculty: OER Awareness (Strict) by Year

	Very Aware	Aware	Somewhat Aware
2014-15	5%	12%	10%
2015-16	6%	16%	12%
2016-17	8%	17%	12%
2017-18	12%	16%	11%
2018-19	14%	17%	13%
2019-20	16%	21%	13%
2021-22	23%	23%	11%
2022-23	29%	25%	10%

## OER Use

### Faculty: Use of OER Materials

Required course materials	15%
Both	14%
Supplemental course materials	18%

### Faculty: Use of Required OER Materials by Year

	Required OER Materials
2015-16	5%
2016-17	6%
2017-18	13%
2018-19	14%
2019-20	15%
2021-22	22%
2022-23	29%

### Faculty: Required OER Course Materials by Teaching Modality

One or more fully online courses	38%
One or more blended course	37%
One or more fully face-to-face courses	28%

### Faculty: Required OER Course Materials by Course Level

Introductory	36%
Intermediate	28%
Advanced	23%