Managing, Accessing, and Using Course Materials

Understanding the Challenges of Faculty and Students

Findings from a December 2020 study of faculty and students in the US.
Background

Over the last years, institutions have struggled to adapt to the changing needs and preferences of faculty and students regarding the materials they need for their courses. The Covid-19 pandemic has only aggravated these pressures. The mass shift to online learning required institutions to quickly move away from print resources and ensure large numbers of students have remote access to key materials, while continuing to focus on affordable learning and resource diversification initiatives.

There are exciting developments in this area that provide academic institutions with opportunities to advance learning and support student success. From open educational resources to technological innovations for tracking engagement, the right support is there to ensure both faculty and students can effectively manage and engage with course materials.

Project

Alterline, an independent research agency, was commissioned by Ex Libris to assess the experience of faculty and students of managing, accessing and using course materials.

This paper includes findings from a US-based survey of faculty and students.
The survey of 103 faculty included...

- Professor: 41%
- Lecturer: 18%
- Assistant Professor: 15%
- Associate Professor: 15%
- Adjunct Professor: 12%

The survey of 257 students included...

- An Undergraduate student: 84%
- A Masters student: 16%

- I was over 21 when I started my undergraduate program: 18%
- I was the first person in my immediate family to go to college/university: 37%
- I am an international student: 6%
- None of the above: 44%
Key Findings

**Faculty are undertaking a large number of course material management tasks themselves.**

Faculty are bearing the administrative burden of managing course materials and only few receive support from others for related tasks. While these activities are not necessarily difficult, they add additional time pressures to already struggling faculty members.

**Academic libraries are comparatively underutilized in the search for new course materials.**

Faculty use other sources, such as web searches or recommendations from peers, more frequently than the academic library to find new course materials. Academic libraries can play a greater role in supporting faculty by ensuring that course resources are accessible, available to students at no or low cost, represent a diverse range of views and authors, and can be adapted to students’ needs.

**Faculty are using a diverse range of resources, but students want easier access to online and more interactive content.**

While faculty are using a range of different sources, hard copy materials are still popular. Students wish to see more online content which is easier for them to access, to support their learning.

**Faculty rely on traditional, incomplete methods to measure student engagement with their course materials.**

Faculty are often checking how frequently students engage with course materials and how well they understand them, to ensure the best learning experience. Traditional methods of measuring engagement, such as class participation and quizzes, are popular, but may be less accurate than hard metrics.
Getting access to online materials is challenging for students, while many faculty find it hard to provide assistance.

Students report numerous problems with finding and accessing online course materials, including paywalls, broken links, and not enough concurrent licenses. While the majority of faculty are helping students to navigate such issues, a substantial minority report finding it difficult to do so.

Faculty are satisfied with support from the library, but would like to see greater involvement in areas of core library expertise.

Faculty report high levels of satisfaction with the support they receive from their library for teaching and learning, but few say they collaborate with the library to manage course materials. Faculty are interested in future collaboration, in particular to purchase, license, and digitize course materials; reduce costs for students; and clear resource copyrights. These findings represent a clear opportunity for academic libraries to leverage their expertise to increase engagement with faculty, and to support teaching and learning activities.

Faculty are making an effort to reduce the cost of course materials, but the expense still has a negative impact on student learning.

Large proportions of faculty have changed course materials to provide students more affordable access. However, students still report substantial negative impact on their success due to the high cost of materials, with added pressure to work more hours and use resources of lesser quality to get by.
Faculty are undertaking a large number of course material management tasks themselves.

Only 15% of faculty reported that they receive help from a teaching assistant, instructional designer, or someone else to manage course materials. While almost one in five receive help to update their learning management system with course materials, only around one in ten receive help to find new course resources and meaningfully arrange them. These tasks place an additional burden on time-poor faculty, who are already juggling multiple research, teaching, and administrative responsibilities.

For each of the following activities, please state whether you receive help to conduct them.
Base: All faculty (103)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Help from Someone Else (%)</th>
<th>I Do This Myself (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewing students’ use of course resources</td>
<td>13%</td>
<td>87%</td>
</tr>
<tr>
<td>Updating course resources from term to term</td>
<td>13%</td>
<td>87%</td>
</tr>
<tr>
<td>Updating course resources on the learning management system</td>
<td>18%</td>
<td>82%</td>
</tr>
<tr>
<td>Arranging course resources in a structured and meaningful way</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Finding new course resources</td>
<td>10%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Yes, with the help of a teaching assistant, instructional designer or someone else: 15%
Yes, and I conduct all related activities myself: 85%
While a minority of faculty members state they find course material management difficult, sizable numbers struggle with such tasks, particularly finding new course resources and reviewing student use. These findings represent an opportunity for better support of faculty by others in the institution or through the adoption of technologies that facilitate or automate administrative tasks.

How difficult or easy do you find the following aspects of creating, managing and sharing materials for the courses you teach?
Base: All faculty who do this activity themselves

- **Finding new course resources**
  - Very difficult: 27%
  - Difficult: 40%
  - Neither easy nor difficult: 23%
  - Easy: 9%
  - Base: 100

- **Reviewing student’s use of course resources**
  - Very difficult: 22%
  - Difficult: 52%
  - Neither easy nor difficult: 18%
  - Easy: 6%
  - Base: 89

- **Updating course resources on the learning management system**
  - Very difficult: 4%
  - Difficult: 18%
  - Neither easy nor difficult: 41%
  - Easy: 27%
  - Very easy: 9%
  - Base: 92

- **Arranging course resources in a structured and meaningful way**
  - Very difficult: 18%
  - Difficult: 48%
  - Neither easy nor difficult: 23%
  - Easy: 8%
  - Base: 99

- **Updating course resources from term to term**
  - Very difficult: 14%
  - Difficult: 47%
  - Neither easy nor difficult: 25%
  - Easy: 12%
  - Base: 96
Most faculty use multiple methods to find course resources, with general web searches (78%), recommendations from peers (76%), and exploration of their own research interests (69%) being the most popular. The library is used less widely, although still by almost half (46%) of the respondents. However, when attempting to access resources outside library systems, students may encounter broken links and paywalls that frustrate them. There are clear opportunities here for faculty to use their academic libraries more frequently to make it easier for students to navigate to course materials at no cost.

Through which of the following sources do you typically find new course materials?

Through exploring my own research interests: 69%

Discipline-specific databases and collections: 65%

Looking at what others in my field select for their courses: 50%

My institution's library: 46%

Search term alerts (eg. Google alerts): 12%

Other: 8%
While almost a third of faculty members consider availability in library collections to be very important when selecting course materials (30%), they attribute greater importance to academic quality (90%), the ability to adapt the content to students' needs (63%), accessibility for people with disabilities (62%), and the cost for students (58%).

### When selecting materials for the courses you teach, how important or unimportant are the following factors?

Base: All faculty excluding ‘Not applicable' (varies)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Very important</th>
<th>Somewhat important</th>
<th>Not very important</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic quality of the content</td>
<td>90%</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability to adapt the content to you/your students' needs</td>
<td>63%</td>
<td>28%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Ensuring course materials are accessible for students with a disability</td>
<td>62%</td>
<td>29%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Cost for students</td>
<td>58%</td>
<td>38%</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>Diversity and inclusion</td>
<td>55%</td>
<td>33%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Availability in your institution’s library collections</td>
<td>30%</td>
<td>43%</td>
<td>22%</td>
<td>6%</td>
</tr>
<tr>
<td>Interactivity</td>
<td>22%</td>
<td>38%</td>
<td>30%</td>
<td>11%</td>
</tr>
</tbody>
</table>

- Red: Not at all important
- Orange: Not very important
- Blue: Somewhat important
- Dark blue: Very important
Faculty are using a diverse range of resources, while students want easier access to online and interactive content.

The most popular resources used regularly by faculty are links to online resources; PDFs of books, book chapters or articles; and references to physical textbooks. The majority of faculty use all resource types except physical and digital course packs and unlinked references to articles or papers online. Despite transitioning to online learning, references to physical books and textbooks remain quite high, which may suggest a lack of alternative online texts. These findings are in line with students’ preferences, as only 8% would be satisfied with accessing course materials solely online. Nonetheless, the key resources that students want to see more of are links to online sources and videos. Notably, when faculty were asked how they have adapted their course materials during the transition to online learning, many said they now include more videos and interactive content. Such choices align with student preferences and aid in student engagement.

**Frequency of faculty use of different types of resources:**
Base: All faculty (103)

<table>
<thead>
<tr>
<th>Resource Type</th>
<th>Never</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Links to resources available online</td>
<td>32%</td>
<td>37%</td>
<td>26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Links to resources available in your institution’s library</td>
<td>9%</td>
<td>15%</td>
<td>32%</td>
<td>28%</td>
<td>17%</td>
</tr>
<tr>
<td>References, without links, to articles/papers</td>
<td>32%</td>
<td>24%</td>
<td>28%</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>Videos</td>
<td>17%</td>
<td>38%</td>
<td>24%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Digital course packs which students can purchase</td>
<td>69%</td>
<td>17%</td>
<td>7%</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Physical course packs which students can purchase</td>
<td>69%</td>
<td>20%</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>References to physical books (other than textbooks)</td>
<td>14%</td>
<td>22%</td>
<td>32%</td>
<td>19%</td>
<td>13%</td>
</tr>
<tr>
<td>References to physical textbooks</td>
<td>9%</td>
<td>13%</td>
<td>19%</td>
<td>36%</td>
<td>23%</td>
</tr>
<tr>
<td>PDFs of books/book chapters/articles</td>
<td>6%</td>
<td>7%</td>
<td>26%</td>
<td>32%</td>
<td>29%</td>
</tr>
</tbody>
</table>

Red: Never | Orange: Rarely | Blue: Occasionally | Light Blue: Most of the time | Cyan: All of the time
“I use much more online content of all kinds [since moving to online learning] - videos, articles on websites, images, YouTube, library resources.”

Faculty member, Humanities

Students’ preferences for different types of resources:
Base: All students (257)

<table>
<thead>
<tr>
<th>Resource Type</th>
<th>A lot more</th>
<th>A little more</th>
<th>About the same</th>
<th>A little less</th>
<th>A lot less</th>
</tr>
</thead>
<tbody>
<tr>
<td>Links to resources available online</td>
<td>22%</td>
<td>24%</td>
<td>39%</td>
<td>11%</td>
<td>5%</td>
</tr>
<tr>
<td>Links to resources available in your institution's library</td>
<td>13%</td>
<td>21%</td>
<td>47%</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>References, without links, to articles/papers</td>
<td>9%</td>
<td>16%</td>
<td>42%</td>
<td>23%</td>
<td>9%</td>
</tr>
<tr>
<td>Videos</td>
<td>18%</td>
<td>28%</td>
<td>40%</td>
<td>10%</td>
<td>4%</td>
</tr>
<tr>
<td>Digital course packs which students can purchase</td>
<td>12%</td>
<td>19%</td>
<td>38%</td>
<td>20%</td>
<td>11%</td>
</tr>
<tr>
<td>Physical course packs which students can purchase</td>
<td>8%</td>
<td>19%</td>
<td>37%</td>
<td>22%</td>
<td>14%</td>
</tr>
<tr>
<td>References to physical books (other than textbooks)</td>
<td>10%</td>
<td>14%</td>
<td>41%</td>
<td>24%</td>
<td>11%</td>
</tr>
<tr>
<td>References to physical text books</td>
<td>12%</td>
<td>15%</td>
<td>44%</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>PDFs of books/book chapters/articles</td>
<td>11%</td>
<td>17%</td>
<td>46%</td>
<td>18%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Faculty rely on traditional, incomplete methods to measure student engagement with their course materials.

Almost all faculty (98%) state that they assess student engagement with course materials and 50% do so at least once a week. Traditional methods for monitoring engagement are popular, including class participation (89%) and quizzes or tests (70%). While faculty are attuned to engagement, their reliance on traditional methods for gauging it may mean they are not getting as full a picture that access statistics can provide.

How do you check if students are engaging with course materials?
Base: All faculty (103)

- Participation in class: 89%
- Completing quizzes and tests: 70%
- Grades in quizzes and tests: 53%
- Statistics on access to course resources: 33%
- Interactive tools: 27%
- Other: 17%
- Annotations on reading materials/videos: 12%
- I do not check if students are engaging with course materials: 2%
Many faculty members said they constantly take student feedback into account when selecting their course materials. Student opinions on how useful resources are and how easy it is to engage with them are collected through informal and formal feedback sessions and surveys. Faculty members reported removing material from their courses or adding additional sources for clarification in response to students struggling to engage.

Access statistics for course materials are relatively infrequently used by faculty (33%), though these may be essential to understanding when and how students are engaging with resources. One in seven students (14%) report reading less than half of their assigned reading, and a further one in five (20%) only read around half. Given the challenges students report accessing materials, particularly online, accurate access metrics would support student engagement more effectively than traditional methods.

On average, how much of the assigned materials for your course(s) do you read or complete?
Base: All students (257)

- All of them: 33%
- More than half, but not all of them: 32%
- Around half of them: 20%
- Less than half of them: 12%
- None of them: 2%
Getting access to online materials is challenging for students, while many faculty find it hard to provide assistance.

Almost all faculty (95%) taught at least some of their courses online during the 2020 Fall semester, with 87% reporting that online teaching was because of Covid-19 restrictions and not part of their normal teaching methods. This unprecedented situation has created new pressures on faculty to assist students in accessing course materials online.

**Faculty said they were helping students by...**

Base: All faculty (103)

- Ensuring students are engaging with course materials: 94%
- Ensuring students can get free access to online materials: 90%
- Ensuring online materials are available for multiple students to access at the same time: 89%
- Managing broken links to materials: 83%
- Ensuring students have access to alternative versions of physical materials: 82%
- Ensuring online materials can be accessed on mobile devices: 60%

Students encountered multiple difficulties accessing course materials online. While the vast majority of faculty members reported helping students access course materials in the online environment, a substantial minority also said it was difficult for them to do so. The greatest difficulties faculty face concern finding digital versions of physical resources and managing broken hyperlinks. When asked what they have done to transition to online learning, faculty reported delivering more links to free online materials, uploading screen shots of key texts, scanning physical materials they would usually hand out in class, and greater use of the learning management system to provide better structure for their course materials.

“My build [in the learning management system] was several orders of magnitude greater than any other year! EVERYTHING had to be loaded. Can’t pass stuff out if there is no classroom time!”

Faculty member, Natural Sciences
<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encountering broken links to materials</td>
<td>46%</td>
</tr>
<tr>
<td>Being unable to find course materials online</td>
<td>44%</td>
</tr>
<tr>
<td>Needing to pay to access course materials online</td>
<td>42%</td>
</tr>
<tr>
<td>Difficulties in meaningfully engaging with course materials online</td>
<td>39%</td>
</tr>
<tr>
<td>Materials that were not compatible with mobile devices</td>
<td>36%</td>
</tr>
<tr>
<td>Not being able to access materials online because other students were using them</td>
<td>26%</td>
</tr>
<tr>
<td>Managing broken links to materials</td>
<td>21%</td>
</tr>
<tr>
<td>Ensuring students have access to alternate versions of physical materials</td>
<td>24%</td>
</tr>
<tr>
<td>Ensuring students have free access to online materials</td>
<td>15%</td>
</tr>
<tr>
<td>Ensuring students are engaging with course materials online</td>
<td>32%</td>
</tr>
<tr>
<td>Ensuring online materials can be accessed on mobile devices</td>
<td>15%</td>
</tr>
<tr>
<td>Ensuring online materials are available for multiple students at the same time</td>
<td>12%</td>
</tr>
</tbody>
</table>
Faculty are going to lengths to reduce the cost of course materials for students, but this still has a negative impact on student learning.

Faculty are actively taking steps to reduce the cost of resources to students, with 64% reporting that they have had to revise course resources because of cost. A substantial minority of faculty (34%) go one step further, only selecting course materials that are free for students.

Have you ever done any of the following because the cost of a particular course material was too high?
Base: All students (257)

- Requested a copy from a classmate/shared with a classmate: 45%
- Obtained an older version of the same materials that was more affordable or free: 37%
- Not read the material and not actively looked for a replacement: 31%
- Requested a copy from the professor: 28%
- Requested a copy from my institution's library: 26%
- I have never had an issue with the cost of course materials: 15%
- Other: 10%
The high cost of course materials has a substantial impact on students’ learning and their overall experience. 59% say that the cost of course materials is an important factor when selecting which courses to enroll in, while over one third (36%) say they have opted not to enroll in a course because the cost of course materials was too high.

36% of students have opted not to enroll in a course because the cost of course materials was too high

The majority of students (56%) report that the high cost of materials had a negative impact on their success as a student. The key frustrations they cite are additional pressure to obtain more part-time work, which distracts them from their studies; having to make do with resources of lesser quality; and wasting money on resources that simply repeat the lectures they attend.

“College is a huge expense that I struggle to meet, so the more that materials cost, the more I spend my time working instead of learning.”

Student, unlisted discipline

Does a high cost of course materials have a positive or negative impact on your success as a student?
Base: All students (257)
Faculty are satisfied with support from the library, but would like to see greater involvement in areas of core library expertise.

The majority of faculty members are satisfied with their library's support for teaching and learning activities; however, much fewer are collaborating with the library to manage course materials. An appetite for further collaboration is evident among almost half of faculty (46%), rising to 55% among those who say they are not currently collaborating with the library.

To what extent do you agree or disagree with the following statements about the library at your institution?
Base: All faculty (103)
“[The move to online learning involved] a lot of scanning and identifying digital editions (with help from our library)”

Faculty member, Humanities

There is a clear opportunity for the library to engage with faculty across key areas, with most interest shown in library support for the purchase, licensing, and digitization of course materials (75%); reducing costs for students (70%); and clearing material copyrights (64%). Many faculty members cited the importance of the library assistance in transitioning to online learning, which indicates the central role libraries can play in making it easier for faculty to manage and deliver course materials.

Would you like the library to do more, the same, or less of the following to support you with managing course materials?
Base: All faculty who did not select ‘Not applicable’ (varies)

<table>
<thead>
<tr>
<th>Service Provided</th>
<th>A lot less</th>
<th>A little less</th>
<th>About the same</th>
<th>A little more</th>
<th>A lot more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase, license and digitize materials for my courses</td>
<td>26%</td>
<td>36%</td>
<td>39%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help reduce the cost of course resources for students</td>
<td>29%</td>
<td>35%</td>
<td>35%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear course resource copyrights</td>
<td>36%</td>
<td>28%</td>
<td>36%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommend relevant materials for my courses</td>
<td>46%</td>
<td>31%</td>
<td>18%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help monitor student engagement with course resources</td>
<td>54%</td>
<td>25%</td>
<td>16%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reflections

Selecting and managing course materials is a significant balancing act for faculty. On the one hand, course resources should align with student preferences for easily accessible and interactive content that is available at low or no cost. On the other hand, faculty members are keen to ensure academic vigour and diversity across the curriculum, to provide the best learning experience for their students.

The transition to online learning has created an additional burden on faculty to support student access to, and engagement with, course materials. The majority of faculty members had already been conducting many of these tasks with little support from others at their institution. Nevertheless, the transition to online has also presented an opportunity, which they have seized, to be creative in delivering materials and meeting student needs. Faculty should be lauded for the impressive work they have done to ensure teaching and learning can continue at a high standard, but there is much more academic libraries can do to support faculty by improving workflows related to managing course resources and ensuring their availability.

Libraries are a key partner for faculty in finding course materials, in helping students to access resources at no cost, and in improving student engagement. Faculty are clearly interested in building greater relationships with their libraries to achieve these aims and provide students a more seamless academic experience. While library services are currently being stretched, there is an opportunity in these challenging circumstances to foster further collaboration and improve student success.
Ex Libris, a ProQuest company, is a leading global provider of cloud-based solutions that enable institutions and their individual users to create, manage, and share knowledge.

In close collaboration with its customers and the broader community, Ex Libris develops solutions that maximize the impact of research activities, increase library productivity, enhance teaching and learning, and drive student mobile engagement.