



## The Faculty Role in College Affordability: Syllabus Creation and Resource Affordability

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## The Faculty Role in College Affordability: Syllabus Creation and Resource Affordability

### Abstract

This study investigates how instructors consider resource cost and availability when compiling assignments in their course syllabi. The academic planning model from Lattuca and Stark is used to frame the influences on instructional material selection. It employs a critical incident technique method, asking instructors to take into account one course syllabus when making assignments. Findings address differences across formats including books, chapters, articles, and video. Findings show differences between disciplines and concerning lack of familiarity with fair use. Increased consultation with library personnel regarding course books would help provide students with affordable materials in compliance with fair use.

**Keywords:** course materials, college affordability, faculty work, critical incident technique, academic libraries, outreach and liaison, survey, faculty librarian collaboration

### Introduction

Participation in higher education can be very expensive and the costs of course resources can be prohibitive for students. The average undergraduate student spends \$1,200–\$1,300 per year and rising on textbooks and supplies (Jenkins, et al., 2020). Students who are struggling to pay for their educational materials also struggle to persist and succeed in college. They borrow more money, work more hours, register for fewer courses, and sometimes choose not to purchase required materials for courses (Jaggers et al., 2019). The issue of course material affordability is recognized at the federal level. The Higher Education Opportunity Act of 2008 required institutions to disclose the cost of textbooks and supplemental materials “to ensure that students have access to affordable course materials by decreasing costs to students and enhancing transparency and disclosure with respect to the selection, purchase, sale, and use of course materials” (HEOA, Section 112). This study set out to explore how the costs of information resources play into instructor decisions when assigning course materials, specifically books, book chapters, articles and media. Using a critical incident technique, the study examines faculty practices in a specific course of their choosing. Much research has focused on the development and use of open education resources such as open textbooks. The goal of this study, however, was to look more broadly at affordable educational resources, including resources acquired by libraries and open access publications, and their use by discipline and format.

Resource cost by discipline is important because of its variation. The average price for academic books is higher for STEM fields than in other disciplines (Gobi Library Solutions, 2021). For instance, the average social science ebook costs \$117.20 while the average science ebook costs \$136.06. The average cost of subscription to an academic journal is \$1,704, and this rises to \$2,479 in the STEM fields (Bosch, Albee, & Romaine, 2021). These variable costs as well as differences in preference for information format led us to include discipline as a factor in our study.

Instructors sometimes adapt syllabi from previous instructors of a course or from courses they took during their own education. This enables them to develop a course with a few

adjustments rather than starting from a blank slate, even though this work has been done before. However, it may lead instructors to overlook the cost variable when assigning texts. Undergraduate courses focused on foundational knowledge may be updated less frequently than graduate courses. Courses in disciplines with longer shelf lives for research (such as humanities compared to sciences) may also be updated less frequently. Academic libraries can be of use to faculty when selecting course materials by directing faculty to open access research and open educational resources, purchasing materials for students to use in coursework, and obtaining instructional materials in alignment with Fair Use principles. The goal of this study was to understand how faculty choose instructional materials and in what circumstances they consider cost to students when assigning learning materials. It reveals opportunities for greater collaboration between faculty and academic library personnel to reduce costs of instructional materials for students and ultimately to contribute to greater student success.

### **Literature review**

Students are concerned about the cost of learning materials. Nyugen, Matheus and Cohen (2020) note that students make choices about what courses to take based on the cost of course materials. Issa, Ibrahim, Onojah, and Onojah (2020) found that undergraduates have a positive attitude towards using Open Education Resources (OER), regardless of discipline. Libraries are also concerned with the cost of learning materials as subscription prices for scholarly research rise (Ebsco, 2021). Library budgets are not growing to match the rise in costs of scholarly resources. Faculty and librarians from the Ohio State University have recognized important collaborations between them to address student needs for low or no cost access to course materials (Nguyen, Mathuews & Cohen, 2021; Dotson & Olivera, 2020), and they appeal to higher education institutions to allocate more money to library collections and open and alternative educational resource initiatives (Nguyen, Mathuews & Cohen, 2021).

Despite the concerns of students and libraries with costs of course materials, faculty have not rushed to adopt OER for their courses. Todorinova and Wilkinson (2020) found that faculty awareness of OER varies widely. While OER uptake has been growing among faculty, they are still in use by only 22% of faculty (Seaman & Seaman, 2022). Tillinghast (2020) conducted interviews with faculty and found that OER adoption was influenced by attitude, performance expectancy, effort expectancy, technology self-efficacy, and facilitating conditions. Martin and Kimmons (2020) found that faculty are concerned with quality, copyright issues, technical difficulties, and sustainability concerns.

In addition to open textbooks, there is a growing body of scholarship that is available open access. At least 28% of scholarly literature is available OA, and the proportion is even higher for more recent publications (Piwowar, 2018). Like resource price, the availability of open access resources differs by discipline and content type. For example, OpenDOAR, a directory of open access repositories, indexes repositories of OA journal articles (4,110); dissertations and theses (3,419); books, book chapters, and sections (2,284); and datasets (464) among other material types, with social sciences receiving the most coverage (4,393) followed by science (4,320) and humanities (4,140) (OpenDOAR, 2022). Assigning open access materials as learning materials could save students and academic institutions some of the growing expenses of for-profit scholarly publishing.

It is not clear from the literature that faculty make a practice of reviewing the instructional materials in their syllabi for the express purpose of reducing costs for students. Rather, they revisit their syllabi to integrate new topics, such as sustainability (Biasutti, 2016), or to improve alignment with program goals (Zimmer and Keiper, 2021). There is evidence, however, that faculty are concerned about the cost of course materials. Blankstein and Wolff-Eisenberg (2019) found that “approximately 87% of faculty often or occasionally give preference to assigning low- or no-cost textbooks, while 59% give preference to assigning course texts or materials that are available through the library.” In keeping with academic libraries’ historic role in selecting and acquiring materials in support of student learning, Dotson and Olivera (2020) discuss librarian efforts to conduct curriculum mapping to recommend course materials to faculty on the basis of cost to students.

Seaman and Seaman (2017) report the average cost of textbooks in the following disciplines: Health and related (\$182), Professional (\$155), Business (\$132), Natural Sciences (\$101), Education (\$87), Social Sciences (\$74), Liberal Arts and Sciences (\$69), Computer and Information Science (\$68). They also found the importance of cost in selection of curriculum materials by instructor varied by age, with those 55 or older rating cost as very important (53%) or important (33%) and increasing to 64% as very important and 26% as important for those under 35 years of age. Furthermore, they reported data by tenured, tenure track, and not tenure track and full and part-time faculty. Non-tenure-track and part-time faculty rated cost as very important in their selection of materials at a higher rate than tenured/pre-tenure or full-time faculty. Dotson and Olivera (2020) cite studies underscoring faculty concern with both cost and efficacy of textbooks and with the cost of education for college students. Faculty concerns about cost and intent to include low-cost materials are challenged by difficulty finding appropriate materials, insufficient numbers of resources, and concerns about quality (Seaman & Seaman, 2017; Dotson and Olivera, 2020). Building on these findings, this study explores these questions through the method of critical incident technique, asking faculty to speak to their practices with the books, book chapters, articles and media they assigned on a particular syllabus, rather than generalizing about their habits. This allows for a more accurate picture of faculty practices.

Faculty information seeking habits are often studied in a generalized way or with a focus on the information seeking habits related to their scholarly publishing work. For instance, Ellis (1989) developed a set of common habits used by faculty in information seeking including starting, browsing, monitoring, chaining, differentiating, and extracting. Much library science research has built upon Ellis’ original findings. For example, Meho and Tibbo (2003) added four other common information seeking habits of faculty: accessing, verifying, networking, and information management. Tenopir, Volentine, and King (2012) found that academics located about a third of the articles they read through searching, 11% through browsing, and 56% of their articles through citation chaining, colleague recommendations, or did not recall the method of discovery. In contrast, academics primarily located books through word of mouth. Meho and Tibbo’s (2003) findings of differences in information seeking practices by format led us to delineate our investigation of instructional resource use by format as well. The researchers also found that older academics tend to read more books than younger academics. Despite the studies on faculty information seeking for scholarship purposes, studies examining faculty information seeking as it relates to how they assign course materials to their students are uncommon. This study seeks to fill that gap.

## **Conceptual Framework**

Lattuca and Stark (2009) offer an academic plan model to describe the factors that influence course design. They include instructional resources as one of the central influences on academic planning. As they point out, many instructors organize their courses around a textbook they select. This is especially true in structured fields such as math and science. Lattuca and Stark highlight the importance of considering the needs of learners in the learning process, one of which is affordability. The cost of course materials dictates perceived affordability of a course. A focus on instructional materials within Lattuca and Stark's (2009) academic plan model is important at this time because market forces have changed. Libraries' staff are now increasingly able to obtain ebooks with more inclusive licenses for coursework, educators have created more open educational resources, students bear higher costs to attend college, and student debt is in the national spotlight.

This study takes a closer look at instructional resources and how they interact with other factors in Lattuca and Stark's model. Lattuca and Stark call out the influence of market forces and discipline on instruction. For higher education generally, market forces include matching courses to job market demand and student interest. For instructional resources, market forces include different publishing models, such as nonprofit versus for profit and open versus proprietary licenses. Market forces drive the cost and availability of instructional materials for libraries and students. We examine how these factors influence faculty choices for what they assign. We ask how often faculty evaluate and adjust the instructional resources they use. We consider how faculty demographics and discipline play into attitudes toward affordability of instructional resources. We address two research questions: 1.) how do faculty locate their instructional materials? And 2.) do faculty consider various methods of making their instructional resources affordable to students? Because the markets are different across disciplines and formats, findings are presented with these variables in mind.

## **Methods**

We consider this a pilot study because there has been little research on the question of how faculty consider library availability when assigning reading and viewing assignments. This is a mixed methods study combining quantitative and qualitative data from a survey (See Appendix for survey instrument). The quantitative questions allowed us to look for trends in syllabi creation habits by discipline and resource format. The qualitative question allowed us to get an understanding of why faculty were making the choices they did regarding content assignments.

Based on Ellis' (1989) and Meho and Tibbo's (2003) lists of common information seeking habits of faculty, we asked faculty how they discovered the resources they asked their students to study for their courses. We asked them whether they located their resources by searching for information, monitoring scholarship in their field, or finding them through their network of colleagues. This allowed us to understand whether consulting a librarian would be helpful in limiting costs at the information discovery stage or primarily at the information access stage. Our premise is that librarians have greater opportunities to suggest materials to those faculty who are searching for information. Because Tenopir, Volentine, and King (2012) noted significant differences in information seeking habits by format, we differentiated the questions in

our study by format. Their findings about the impact of years of teaching on format preferences also led us to include years of teaching service as a variable.

The survey was distributed to all 1,775 instructors at a university classified as “Doctoral Universities: Very High Research Activity” (Carnegie Classifications, 2022). We employed critical incident technique (Flanagan, 1954) to ensure faculty had a specific course and syllabus in mind rather than generalizing their habits. We received 172 responses, a 10% response rate. We provide descriptive statistics regarding the responses to the survey as well as qualitative discussion of the open-ended responses. We consolidated nine disciplines into four disciplinary categories in accordance with the categories outlined by Anthony Biglan (1973) to ensure there were large, consistent sample sizes for each category. The following table displays the response rate by discipline.

<b>Discipline</b>	<b>Responses</b>	<b>Response Rate</b>
Natural Sciences, Information and Computer Sciences, Engineering	56	9%
Social and Behavioral Sciences, Education, Management	52	12%
Public Health and Health Sciences, Nursing	19	11%
Humanities and Fine Arts	36	10%
Did not specify discipline	9	

Table 1. Faculty response rate by discipline.

Respondents answered the survey keeping in mind a graduate course (24%) or an undergraduate course (76%) they were teaching. 15% of the respondents were teaching their course for the first time, 32% had taught their course 2-4 times, and 53% had taught their course more than 4 times. 5% of the respondents were answering based on an online course, 78% were answering based on an in-person course, and 17% were answering based on a hybrid course. 39% of respondents had been teaching for less than 10 years. 27% had been teaching for 10 to 20 years, 22% had been teaching 20 to 30 years, and 11% had been teaching for more than 30 years.

### **Findings**

We begin with general observations by discipline about format, means of identification, and factors considered in selection. Next we delve into the data by instructional resource format: books, chapters, articles, and media. For each format, we consider disciplinary differences,

common methods of discovery, and types of affordability (open access, library availability, and direct cost to students). Books emerged as the format for which there is the most opportunity for engagement with faculty about affordability, and to inform those conversations, we also examine preferences for books as a format by faculty’s career length. Qualitative responses that support quantitative data are intermixed in these sections.

### General observations

Opportunity to select affordable materials occurs when a course is taught for the first time or when a syllabus is revised. Most of the syllabi in the survey were either created (15%) or updated (48%) for the semester the course was being taught (See Figure 1). We were pleased to see that new and experienced faculty alike were diligent about updating their syllabi. Graduate and undergraduate courses were updated at similar rates. One education faculty member mentioned, “I generally update at least half of the syllabus every time I teach a course.”

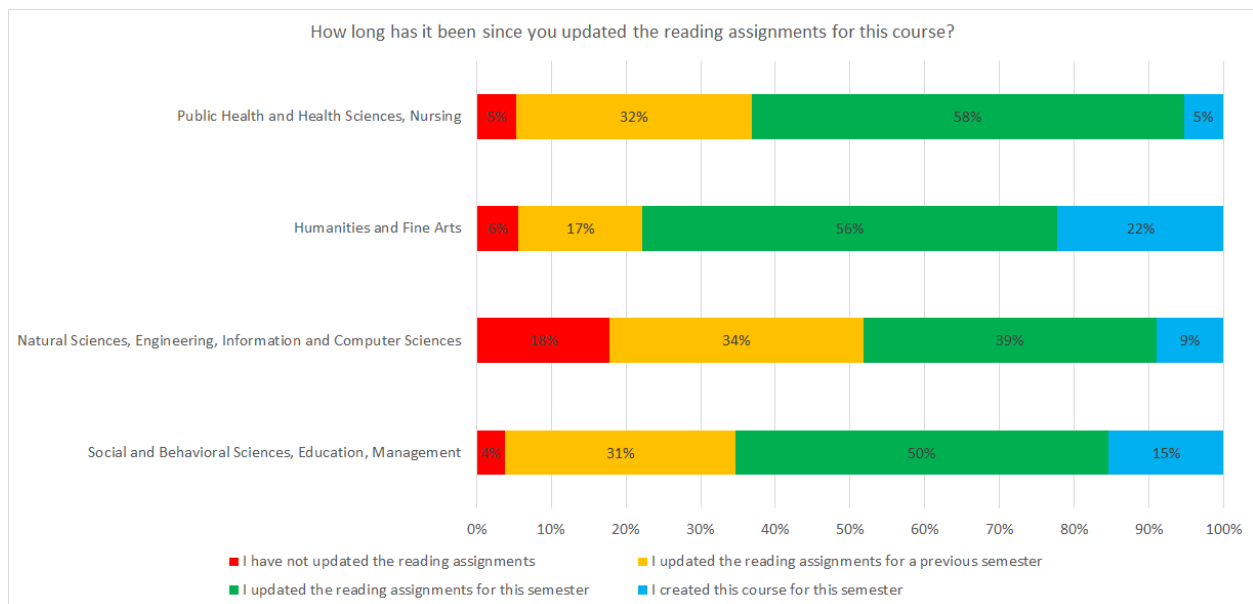


Figure 1. Proportion of respondents reporting how recently they updated their syllabus, by discipline.

Most faculty (76%) had never consulted a librarian or library staff member regarding their course materials before teaching their course (See Figure 2). We find this of concern because faculty missed an opportunity to provide students with materials from the library at no cost to students. If their assigned materials were not already available at no cost to students through the library, library personnel could investigate procuring articles, books, ebooks, or streaming video or they could suggest alternative resources. The qualitative data demonstrates opportunities for outreach to faculty who may benefit from working with librarians and library staff. One experienced Education faculty member wrote, “I probably don't ask for help enough, but honestly don't have a good sense of what help a librarian might offer me for this.” This is an unfortunate lost opportunity because this faculty member has had several decades to develop relationships with library personnel. A Science faculty member expressed a similar sentiment, saying “I don't think I know enough how much a librarian can help me put together readings for

my course.” Another stated, “I’ve only reached out to librarians \*after\* I find a resource I want to use and can’t find it in the library or online. Are there times I should reach out before that?” A Social & Behavioral Science faculty member stated, “I typically determine the articles I want students to read and figure out access after-the-fact, as opposed to the other way around.”

A faculty member who assigned a book and some articles for their course said “Due to online resources, the [university] libraries are currently under-utilized by our department both in research and in teaching/learning. By far, their main use is as a quiet study space for the students. From the point of view of our department, either the libraries should adapt to make themselves more useful to [university] academic goals (not sure how), or else they should downsize.” They indicated that they looked for open access availability of articles, suggesting that their discipline may have many open access resources available. However, their comment does not recognize the role libraries play in open access publishing and providing no to low cost materials for students.

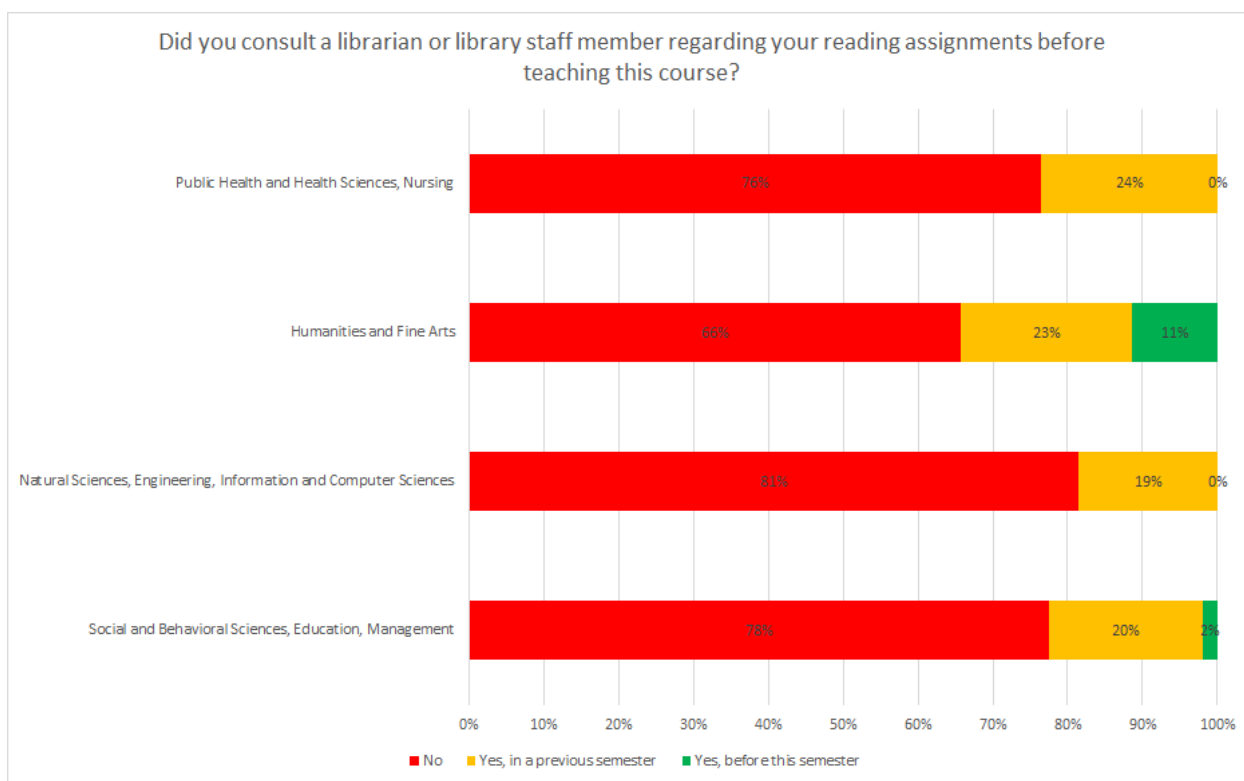


Figure 2. Proportion of respondents reporting consulting a librarian regarding their course content assignments by discipline.

While many faculty members did not contact library personnel, those who did were generally pleased with their experiences. In the qualitative responses to our survey, many faculty expressed thanks to librarians and library staff who work with them on fair use/copyright issues and who manage library materials for courses on the campus learning management systems. For example, a management faculty member said “My goal is to assemble relevant readings through course reserves in the Libraries, or open source materials so that students do not need to buy a textbook. I am very grateful for the work of the librarians who clear the copyrights and permissions.” A humanities faculty member noted, “I have worked with librarians particularly to get ebooks and



films for courses I teach, and I've been incredibly happy with how committed they were. I try to keep the cost of courses as close to zero as possible for the readings for the students, and the library has been really super at helping me meet this goal.” An engineering faculty member said, “I look for resources that the students have access to through the libraries. The subscriptions to journals in my field are very important for this, because this gives students online access to the most relevant literature in the field without having to pay.” From a public health faculty member we heard, “e-books available through the library are important and very helpful. It kills me when students pay to 'rent' books.” A Science faculty member related enthusiastically, “The video streaming through the libraries has been an excellent addition! I also appreciate the streamlined online system for requesting videos for course reserves/streaming.”

### *Format*

Regardless of discipline, the majority of respondents who assigned articles to their classes reported creating or updating their reading assignments for the semester they were teaching the course. This suggests that the assignments updated most frequently may be the article readings. Unfortunately, since article readings are often provided through the libraries free of charge to students, updating these readings does not have as much potential for impact on affordability as updating book reading assignments. Perhaps assigning articles and book chapters is a method faculty are using to choose content while considering cost to students. An Engineering faculty member stated, “I copy chapters and articles and scan them and put them in [my course website] for the students to read. I am concerned about affordability.” Most faculty across all disciplines assigned at least one article (See Figure 3). Books, chapters, and media varied in popularity by discipline.

In the natural sciences and engineering, faculty were the least likely to assign media, articles, chapters, or books compared to other disciplines. Natural Sciences, Computer Science and Engineering use media much less than the other three disciplinary categories. A Social & Behavioral Science faculty member said, “This course does not use “media” (videos, podcasts, and the like) but does use public websites of international organizations, international courts, foreign ministries, and national courts.”

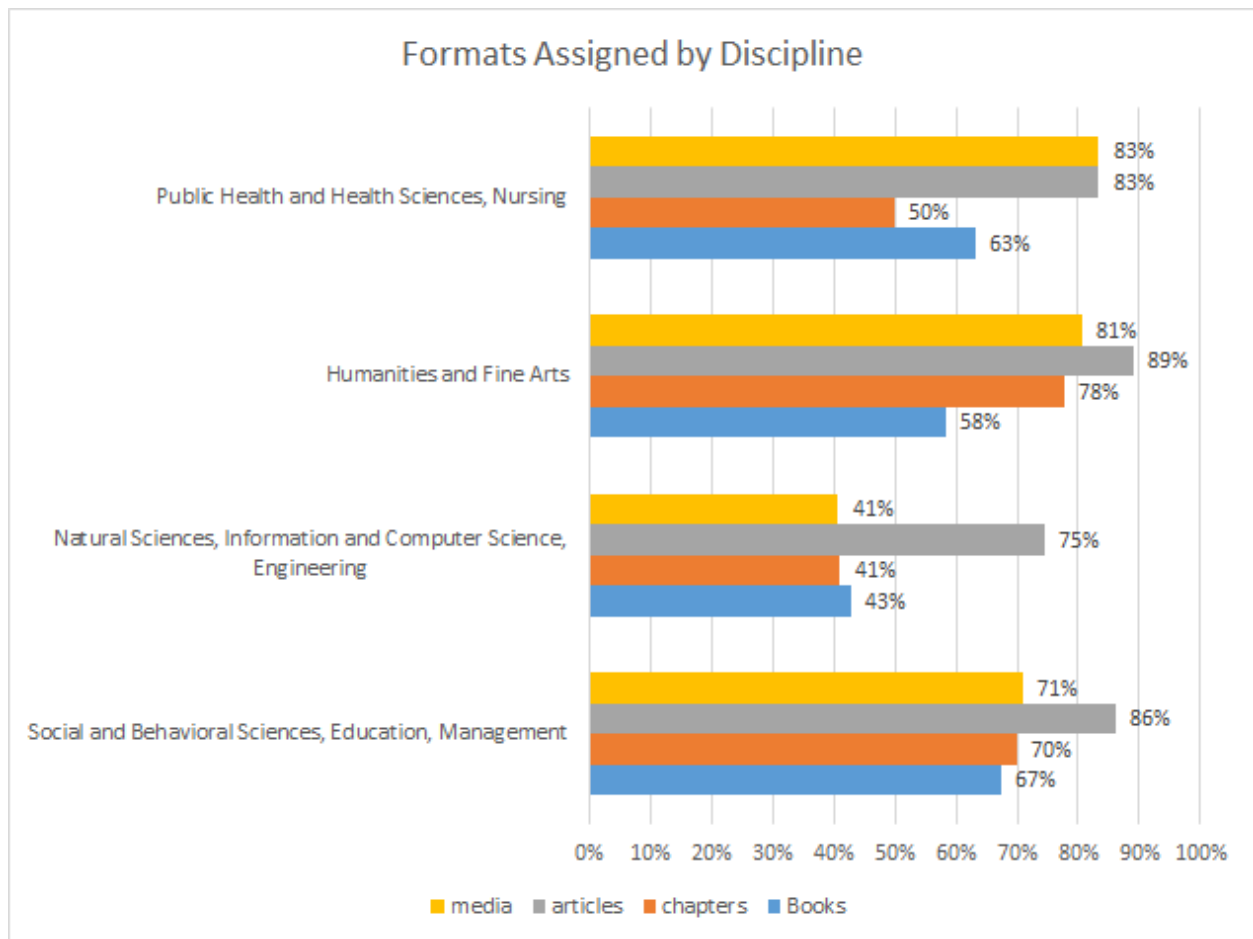


Figure 3. Proportion of respondents who assigned articles, books, chapters, and media by discipline.

### *Means of identification*

The least popular way for faculty to identify course materials across formats was adopting them from a colleague's syllabus (See Figure 4). However, one new Nursing faculty member mentioned, "Because it was the first time I taught it, it was easiest to use the previous instructor's preferred text. I plan to change texts next semester."

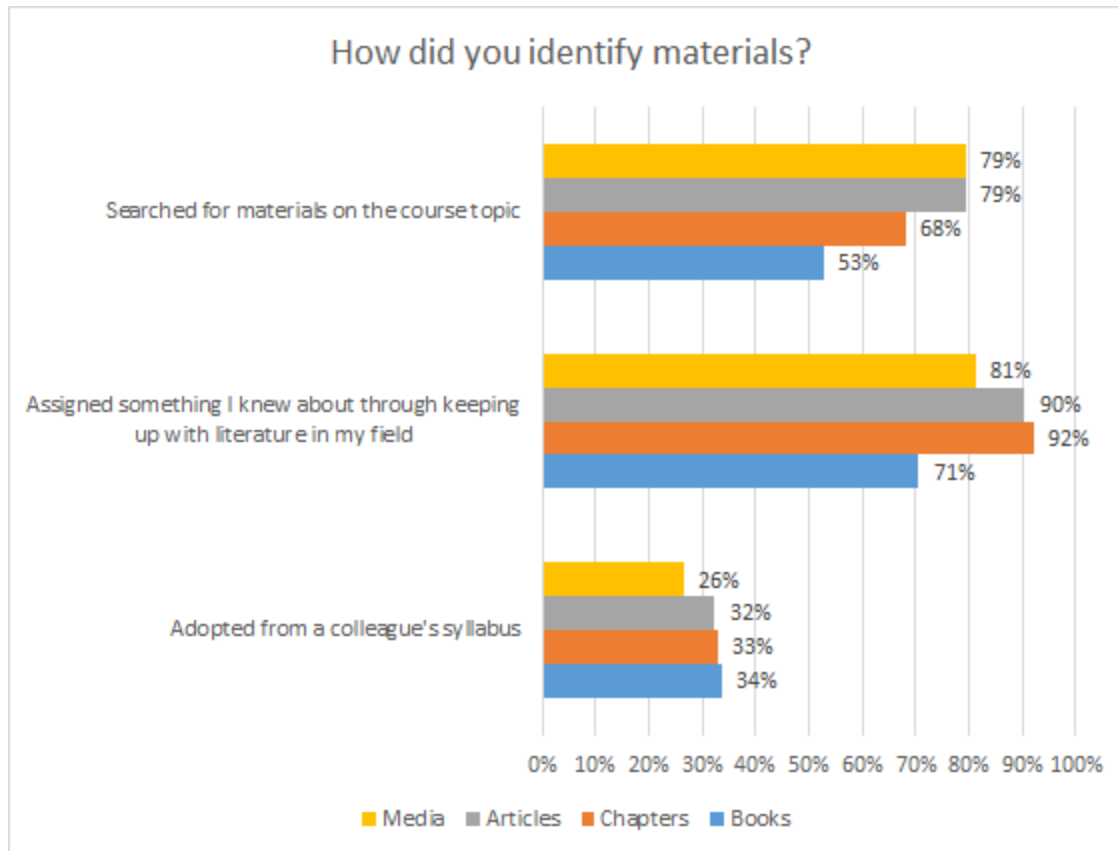


Figure 4. Proportion of respondents reporting how they discovered materials for their course by format.

#### *Factors considered in selection*

We asked faculty to indicate which factors they considered when choosing course materials: “open access availability,” “availability through the library,” “cost to purchase,” or “none.” We did not define “open access.” Across material types, between 19-23% of faculty considered “none” of the factors that would ease student use of the material, which suggests these instructors give no regard to course material cost (See Figure 5). However, most indicated that open access availability, availability through the library, or cost to purchase are priorities when they consider choosing course materials. One unidentified-by-discipline faculty member stated, “I would like to use more ebooks and multimedia in my courses, but I don't want to require students to buy them, and I'm concerned that the library's licenses to use such products may expire before students are done with them. Being able to download content for use indefinitely would be helpful. I am also interested in being able to search and download more open access content via the library as a way of dealing with this concern.” This multifaceted set of concerns express the need for a discussion with a librarian who can address the complex licensing models vendors offer libraries, and the options for finding open access content. Those who have found and successfully used open access content seem pleased. A Science instructor quipped, “OEM for the win!”

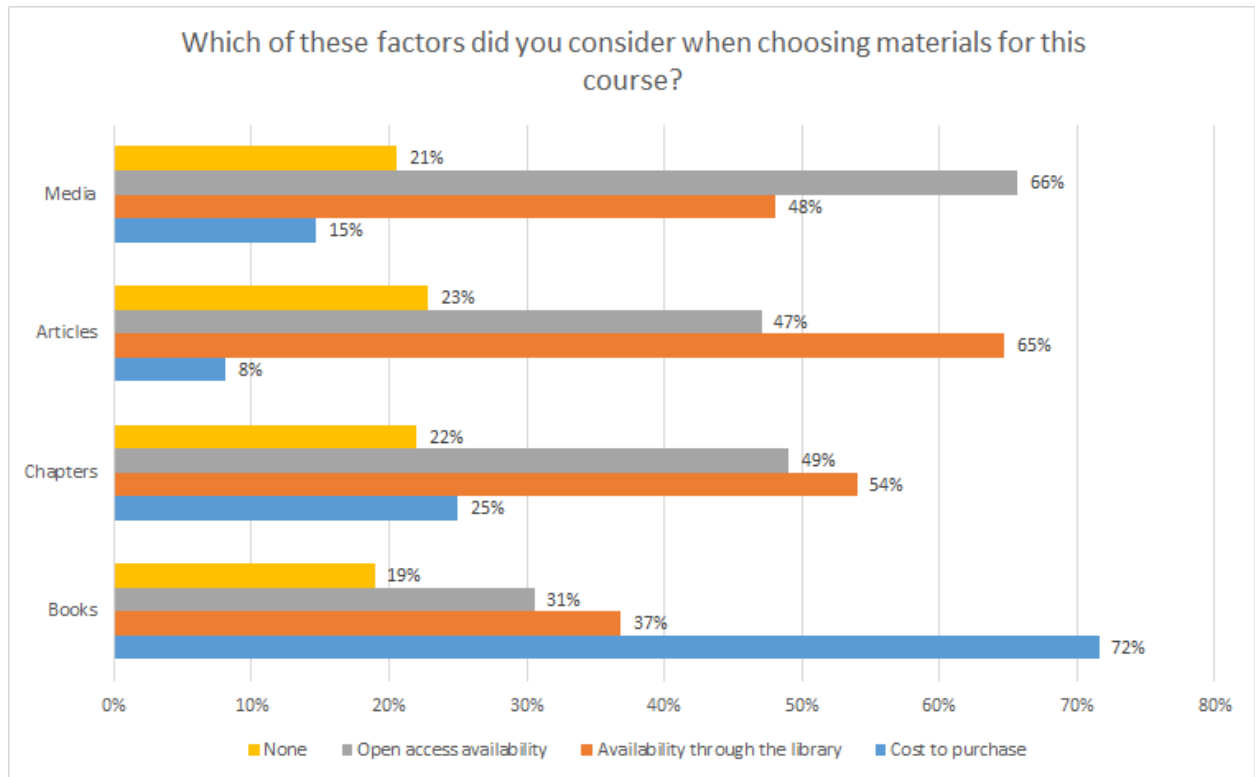


Figure 5. Proportion of respondents reporting affordability factors they considered when assigning content, by format.

### Books

Instructors across disciplines were likely (56%) to assign at least one book for their courses. However, this did not hold true for instructors in Natural Science and Engineering (See Figure 3). This might be related to the fact that books in STEM disciplines are the most expensive on average (Gobi library solutions, 2021). It may indicate that faculty in these disciplines have considered the cost implications of requiring students to purchase books.

Instructors assigned mostly books they knew about by keeping up with the literature in their field, but many of them reported searching for books on the course topic (See Figure 3). The least reported method for discovering books was adopting them from a colleague's syllabus. However, more faculty reported adopting books from a colleague's syllabus than reported adopting the other material types from a colleague's syllabus.

In our sample, 72% of respondents considered the cost to purchase when assigning books (See Figure 5). 37% of instructors considered availability through the library. 17% considered open access availability. 19% did not consider any of these factors when assigning books. The proportions of those who considered cost and library availability are significantly lower than those found by Blankstein and Wolff-Eisenberg (2019) when not employing critical incident technique, suggesting that faculty support affordability more in theory than in practice. When selecting book assignments, faculty respondents from the Humanities and Fine Arts considered

cost to purchase, availability through the library, and open access availability more often than the other disciplines.

Instructors who had been teaching more than 30 years were less likely to consider open access books compared to instructors with less experience. (See Figure 6). While Seaman and Seaman (2017) found younger instructors ascribed more importance to cost in selection of curriculum materials, our study found that while newer instructors were more likely to be interested in open access books than instructors who had been teaching more than 20 or 30 years, they were less likely to consider in cost to purchase books or availability through the library.

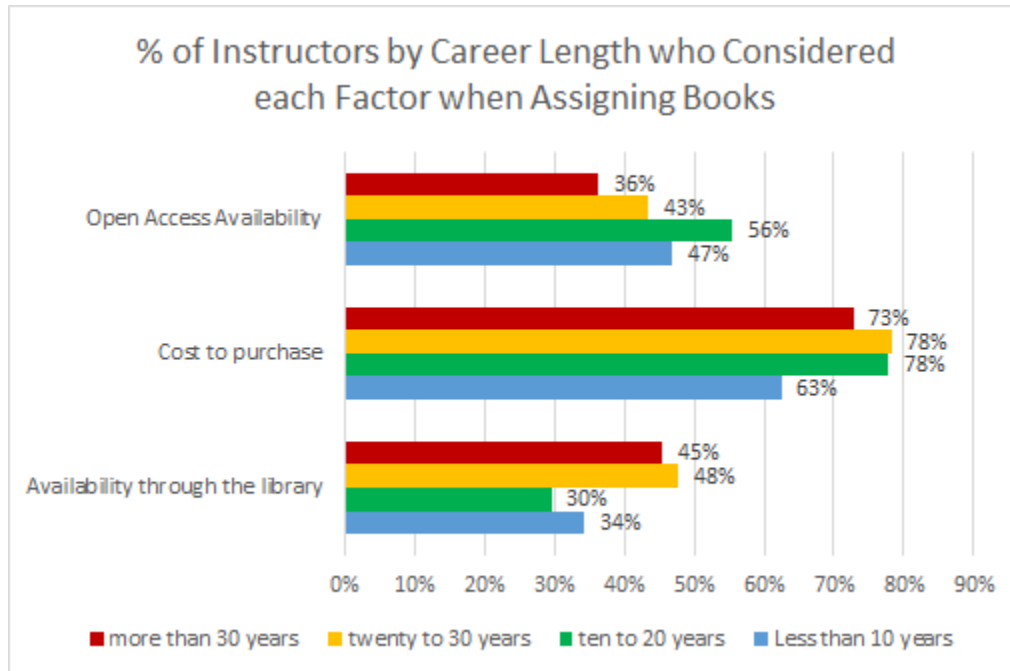


Figure 6. Proportion of respondents from four career stages who considered various affordability factors when assigning books.

### Book Chapters

Most (60%) instructors assigned at least one book chapter for their courses. However, this did not hold true for Natural Science, Engineering, or Nursing (See Figure 3). This aligns with the finding that STEM disciplines are less reliant on whole books as well.

The majority of respondents (92%) reported locating book chapters by keeping up with literature in their field (See Figure 4). It may be more effective to locate book chapters through chaining from reference lists since individual book chapters are not always as discoverable as books and articles through search engines and database searches.

In our study, 16% of respondents considered the cost to purchase book chapters when assigning readings (See Figure 5). 34% considered availability through the library. 30% considered open access availability. It makes sense that faculty are more interested in library availability than cost to purchase for book chapters than books, because they are likely not

asking students to purchase the books containing assigned chapters, but providing links to the chapters on course websites. It is also easier to obtain a chapter of a book through interlibrary loan for an entire class than a whole book. It is interesting that more faculty considered open access availability for book chapters than for books, since book chapters, like books, are less likely to be available open access than articles.

### Articles

Most (82%) instructors assigned at least one article for their course. This majority held true across all disciplines (See Figure 3). Even the majority of STEM instructors assigned at least one article to their classes despite their tendency to assign fewer instructional materials. Many respondents reported locating articles by keeping up with literature in their field (90%) or searching for materials on their course topic (79%) (See Figure 4).

In our sample, 5% of respondents considered the cost to purchase articles when assigning articles (See Figure 5). 40% considered availability through the library. 29% considered open access availability. It makes sense that faculty consider library availability and open access availability more frequently than cost to purchase for articles, since they are unlikely to ask students to purchase articles but rely on links to library or open access article sources.

While faculty in most disciplines were more likely to respond that they considered availability through the library than open access availability for articles, faculty in natural sciences were more likely to consider open access availability than availability through the library (See Figure 7).

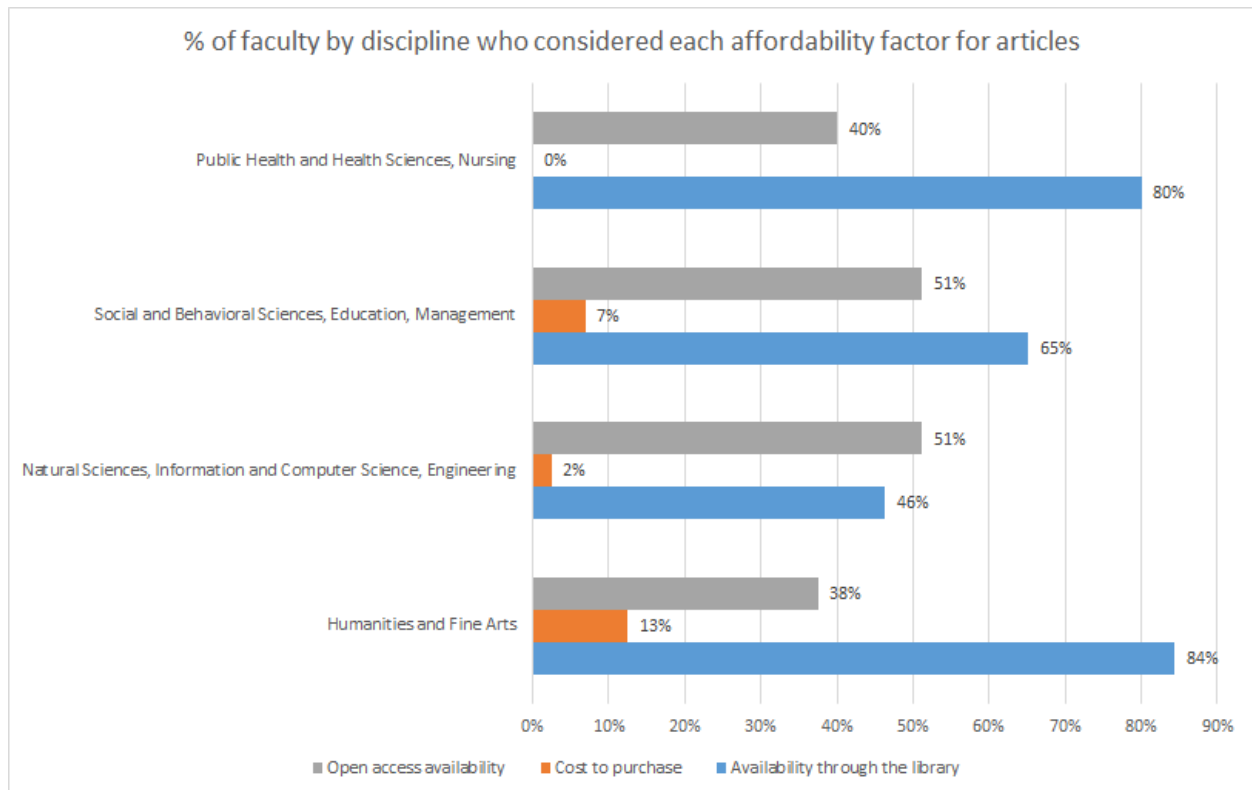


Figure 7. Proportion of faculty by discipline who assigned articles who considered open access availability, cost to purchase, or availability through the library.

### Media

In our study, 63% of respondents assigned media such as videos, music, or podcasts on their syllabi. Instructors assigned media at a higher percentage than books or book chapters, but lower than articles. This speaks to the growing importance of audiovisual materials in academic libraries. While a majority of faculty who had been teaching for less than 30 years assigned media, the majority of faculty who had been teaching for more than 30 years did not (See Figure 8). Respondents who had assigned media were more likely to say they had updated the content assignments on their syllabi than those who had not assigned media. Faculty in Natural Science, Information and Computer Science, and Engineering were less likely to assign media (See Figure 3). This finding may reflect different teaching styles in these disciplines.

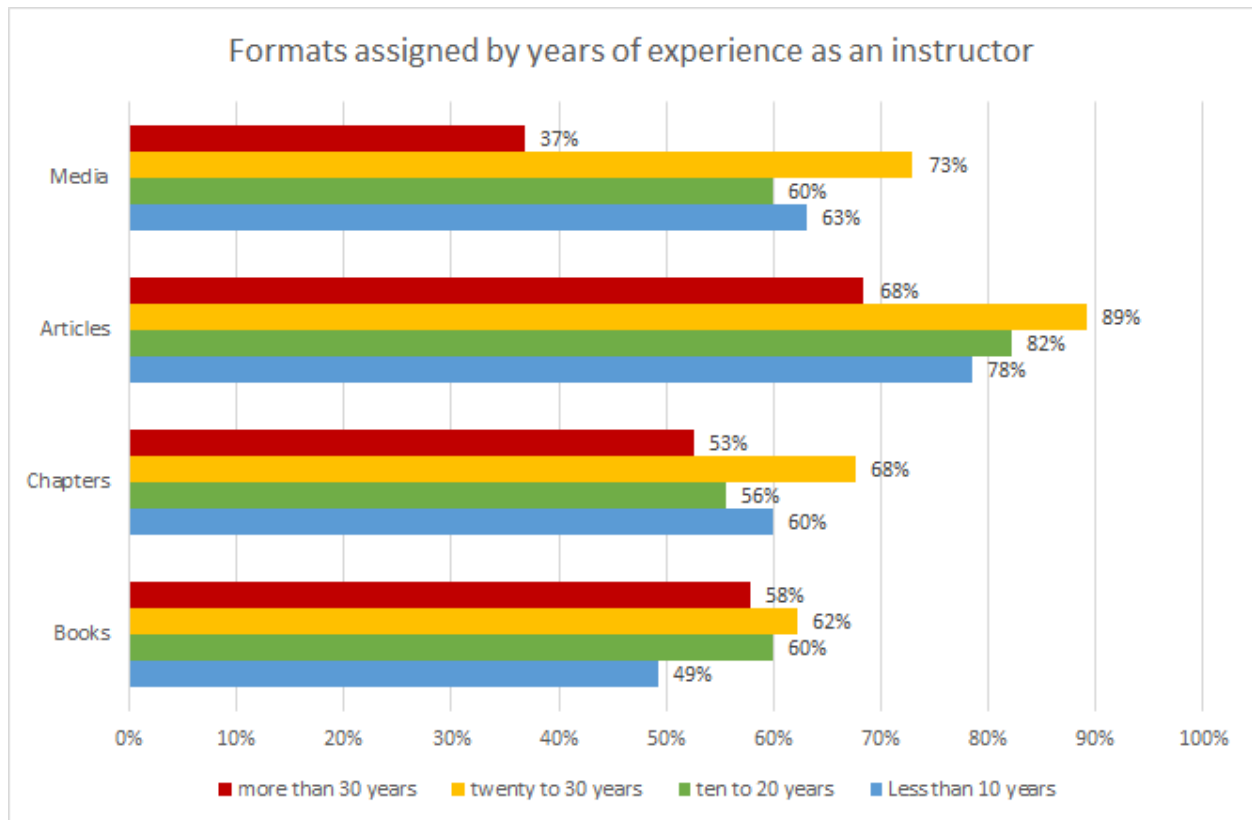


Figure 8. Formats assigned by years of experience as an instructor.

Most respondents reported that they identified media for inclusion in their syllabi by keeping up with developments in their field. The percentage of faculty who said they discovered media by searching for materials on the course topic (79%) was particularly high compared to other formats (See Figure 4). This could be an indication that searching for media is more necessary than for other formats because scholarly communication often takes place via articles and books rather than audiovisual formats. Only 26% of respondents reported adopting media

from a colleague's syllabus. Since this format is of emerging importance for teaching, existing syllabi may not provide faculty with media to adopt for their own course.

In our sample, 9% of respondents reported considering the cost to purchase when assigning media (See Figure 5). 27% considered availability through the library. 38% considered open access availability. As with chapters and articles, faculty were more interested in library availability and open access availability for media than they were in cost to purchase. This suggests that they are providing links to media in their course sites rather than expecting students to purchase these resources.

## **Discussion**

The frequency at which instructors update their reading lists is excellent for maintaining currency and relevance for students and potentially for seeking low or no cost options. To realize this potential, faculty and library personnel must be in regular communication about course material requirements, and we didn't find this to be a common area of collaboration.. The pressure on libraries to keep up with changing syllabi could be mitigated by supporting more open access publication of research and educational materials and by assigning more open access and educational materials. Furthermore, calculations about the costs of supporting open access publishing should factor in the affordability benefits for students.

Results show instructors rarely consult librarians about availability of their assigned materials before the semester begins. This suggests a lack of awareness of library services and an opportunity for more outreach about topics such as acquiring access to course materials for student use, adding existing library resources to course reserves, developing open educational resources, identifying relevant open access content, and consulting on copyright and fair use. The qualitative feedback from Natural Science, engineering, and nursing showed that these faculty could use additional outreach on copyright and providing electronic course materials through their learning management systems. With a higher rate of faculty/librarian collaboration and a focus on cost through the early stages of course material selection, students could realize the cost savings and ease of access about which faculty indicated concern.

Faculty who responded to the open-ended questions often recognized the value librarians could bring to bear on costs of student course materials, or at least had some awareness of the potential. Faculty have enthusiasm and confidence particularly for the course reserves and copyright/fair use services that library personnel provide, and this can be a building block for more collaboration around course material selection and provision. Scaling up collaboration around open educational material creation and/or course material selection and acquisition across curricula would necessitate higher levels of staffing. This is ultimately a shift of cost from students to the academic institution.

Relating our findings back to Ellis's (1989) scholarly information seeking behaviors, we observe that the faculty in our study were not regularly "starting" their information seeking with the libraries or with the collaboration of a librarian, as they may have done in 1989. We recommend to faculty concerned over resource affordability that they consider "differentiating" their selections based on affordability in addition to quality. Nyugen, Mathuews and Cohen's research (2021) found that students are more likely to choose courses that have lower course



material costs, and faculty want to teach courses that students want to take. Departments may consider evaluating faculty instruction based on their attention to affordability of course materials. Collaboration with library personnel during the course material selection process will help faculty meet or exceed this expectation.

Although the number of instructors who selected course materials based on a colleague's syllabus was comparatively low (26%-34%, depending on material type), this method of content selection can lead instructors to overlook the affordability aspect of their course content assignments. We recommend that instructors who adopt course material assignments from their colleagues investigate the affordability of those resources before assigning them to students. This recommendation extends to materials instructors encounter by keeping up with literature in their field. Better yet, library personnel could work with faculty who teach with open educational resources, open access publications, and materials from library collections to become influencers on their colleagues' choices of course materials.

An overwhelming majority of instructors reported assigning articles for their courses. This is another area where instructors could collaborate with library staff to navigate the options. Faculty are already sourcing many of the articles they assign from libraries. In addition, instructors can consider assigning open access articles and publishing their own research with open access licenses to facilitate affordable course materials for other instructors and students worldwide.

The majority of instructors reported assigning books for their courses, and this can present challenges when some publishers do not sell ebooks they deem to be textbooks to libraries, preferring instead to maximize sales to individual students. Furthermore, the myriad access levels at which publishers sell ebooks can inhibit their use for courses if only limited access is offered, or if unlimited access is prohibitively expensive. These are some of the negative market forces that libraries can work to counterbalance by investing in non-profit, open access publishers. Publishers can contribute to the increased discoverability of book chapters by providing metadata which includes chapter titles, chapter level subject classifications, and chapter authors.

Cost to purchase and availability through libraries are particularly important for books because unlike articles and book chapters, usually whole books cannot be loaned from another library for an entire class of students for the duration of the course. Any amount of cost can be a barrier for students purchasing books, and it is concerning that faculty are more likely to consider cost to purchase than availability through the library. This tendency may indicate a lack of knowledge that library personnel are willing to purchase books for courses, or frustration that publishers may not sell ebooks to libraries. Because faculty are more concerned about the cost of books for their students than the cost of articles, course books are an area where librarians have an opportunity to rectify a problem that is important to faculty and students. Our data show instructors who had been teaching more than 20 or 30 years were interested in reducing student costs, but less likely to be interested in assigning open access books, indicating that older faculty members may need outreach especially on open access books. Newer instructors who had been teaching less than 10 years were interested in reducing resource costs, but were less likely to be interested in availability of books through the library, indicating that they may need additional outreach about library services. Books, with their longer publication cycles, are more likely to

remain on a syllabus longer. Furthermore, because more faculty look for article availability more often than book availability through libraries, there is greater potential for impact on course material costs through faculty-library personnel collaborations that focus on books, especially in those disciplines that tend to be more book and chapter dependent than article dependent. This will include Education, Information and Computer Science, Social and Behavioral Science, and Public Health and Health Science.

Our data demonstrated that even more faculty assign media than books, and faculty with less than 30 years of experience assign more media than late career faculty. For these reasons, libraries would do well to consider collection practices that give relatively more weight to streaming media in the future. The Science faculty member who commented so favorably on the library's streaming media services is likely a bellwether of this need.

Lattuca and Stark (2009) explain that instructional materials are interrelated with instructional purposes and instructional content. That means that part of educating students to become lifelong scholars is modeling sustainable avenues to obtain educational materials. Along with the disciplinary content students learn in each class, they also learn how to discover and use information in their field. We call on faculty to evaluate and adjust their instructional resource assignments with cost to students in mind in accordance with Lattuca and Stark's (2009) model for academic planning (See Figure 9). As Lattuca and Stark (2009) make clear, academic planning has many influencers beyond faculty. Publishers, policy makers, and institutional administrators have roles to play in ensuring affordable instructional materials are available to students.

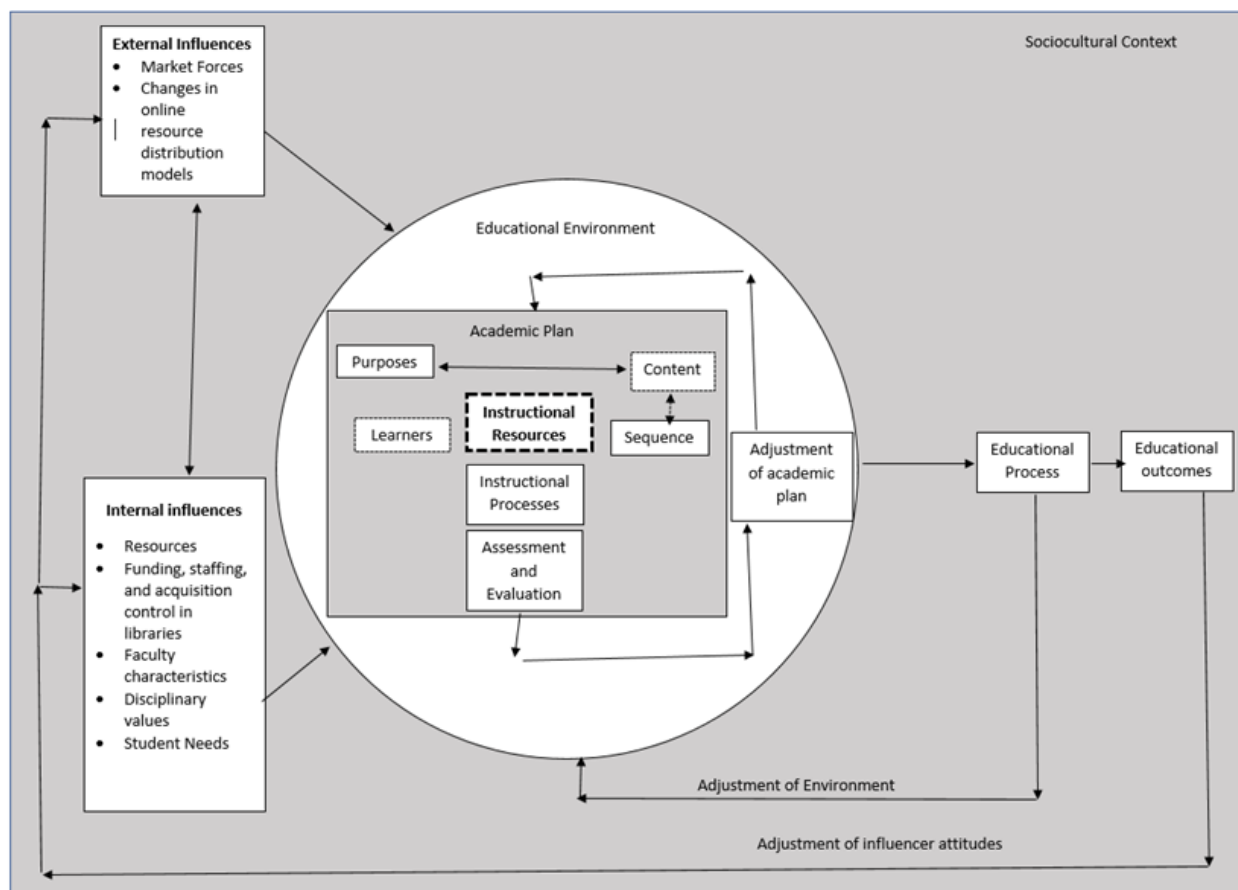


Figure 9. Adaptation of Lattuca & Stark's (2009) Academic Plan Model focused on instructional resources.

We were hoping to share our data with readers, but felt that the combination of discipline, institution, and number of years teaching allowed the data to be too readily reidentified. In future studies, working with researchers at several institutions to create a combined dataset representing multiple institutions could facilitate data sharing.

### Implications for Research

Further research could investigate whether faculty consider the availability of ebooks through the library differently than print books. It will be important to investigate faculty awareness that libraries can sometimes provide unlimited access to online books for use in courses. Further studies on this topic could employ interviews or focus groups to discuss with faculty their perceived advantages and disadvantages of obtaining course materials through the library versus open access or freely available on the web. The authors wonder how scholars in this study understood “open access” and whether they may have confused open access materials with materials available for free on the internet. In future research, scholars may want to provide a definition of open access for faculty. An investigation of faculty approaches to course material selection at other institutional types beyond public research universities would reveal if private colleges and community colleges, for example, are more or less concerned with affordability. As

library personnel encourage greater adoption of low or no cost course materials, it would be worthwhile to study the effectiveness of targeted outreach and collaborative activities.

### **Conclusion**

Higher education is about building knowledge and student success. Affordability is a significant factor in student success, and institutions should be addressing the course material costs students are bearing. Purchasing and providing course materials centrally is more cost effective. Academic libraries are traditional and effective centralized providers of educational materials. The costs of educational materials to students can be defrayed with more investment in academic libraries, both for collections and staff, from higher education institutions and, in turn, more public investment in higher education, shifting scholarly communication from for-profit publishers to non-profit publishers reinvests in the research and learning ecosystems and makes course materials more affordable for higher education institutions and students. Faculty and library personnel collaboration throughout the course material development and selection process has great potential to reduce student costs.

## References

- Biasutti, M., De Baz, T., & Alshawa, H. (2016). Assessing the Infusion of Sustainability Principles into University Curricula. *Journal of Teacher Education for Sustainability*, 18(2), 21-40. <https://doi.org/10.1515/jtes-2016-0012>
- Biglan, A. (1973). Relationships between subject matter characteristics and the structure and output of university departments. *Journal of Applied Psychology*, 57(3), 204-213. <https://doi.org/10.1037/h0034699>
- Blankstein, M., & Wolff-Eisenberg, C. (2019). Ithaca S+R Faculty Survey 2018. <https://doi.org/10.18665/sr.311199>
- Bosch, S., Albee, B., & Romaine, S. (2021). The new abnormal: Periodicals price survey 2021. *Library Journal*. <https://www.libraryjournal.com/story/The-New-Abnormal-Periodicals-Price-Survey-2021#:~:text=Looking%20past%20the%20pandemic%20to%20the%20new%20periodicals,%20%20%2C239%20%2013%20more%20rows%20>
- The Carnegie Classification of Institutions of Higher Education. Carnegie Classifications. (n.d.). Retrieved March 1, 2022, from <https://carnegieclassifications.iu.edu/>
- Dotson, D.S., & Olivera, A. (2020). Affordability of course materials: Reactive and proactive measures at The Ohio State University Libraries. *Journal of Access Services*, 17(3), 144-163, DOI: 10.1080/15367967.2020.1755674
- Ebsco. (2021). Serials Price Projection Report. <https://www.ebsco.com/blogs/ebscopost/2022-ebsco-information-services-serials-price-projection-report>
- Ellis, D. (1989). A behavioural model for information retrieval system design. *Journal of Information Science*, 15(4-5), 237-247. <https://doi.org/10.1177%2F016555158901500406>
- Flanagan, J. C. (1954). The critical incident technique. *Psychological Bulletin*, 51(4), 327-358. <https://doi.org/10.1037/h0061470>
- Gobi Library Solutions. (2021). 2020/2021 New book price and output report.
- Higher Education Opportunity Act. (2008). <https://www2.ed.gov/policy/highered/leg/hea08/index.html>
- Issa, A. I., Ibrahim, M. A., Onojah, A. O., & Onojah, A. A. (2020). Undergraduates' attitude towards the utilization of open educational resources for learning. *International Journal of Technology in Education and Science*, 4(3), 227-234. <https://doi.org/10.46328/ijtes.v4i3.105>

- Jaggars, S.S., Rivera, Marcos, D., & Akani, B. (2019). College Textbook Affordability: Landscape, Evidence, and Policy Directions. Policy Report. Midwestern Higher Education Compact. <https://files.eric.ed.gov/fulltext/ED598412.pdf>
- Jenkins, J.J. et al. (2020). Textbook Broke: Textbook Affordability as a Social Justice Issue. *Journal of Interactive Media in Education*, (1) 3, 1–13. DOI: <https://doi.org/10.5334/jime.549>
- Lattuca, L. R. & Stark, J.S. (2009). *Shaping the college curriculum: Academic plans in context*. San Francisco, CA: Jossey-Bass.
- Martin, T., & Kimmons, R. (2020). Faculty members' lived experiences with choosing open educational resources. *Open Praxis*, 12(1), 131. <https://doi.org/10.5944/openpraxis.12.1.987>
- Meho, L. I., & Tibbo, H. R. (2003). Modeling the information-seeking behavior of social scientists: Ellis's study revisited. *Journal of the American Society for Information Science and Technology*, 54(6), 570-587. <https://doi.org/10.1002/asi.10244>
- Nguyen, D.J., Mathews, K.B., & Cohen, B. (2021). Making Academic Materials Available for Free or at Minimal Cost. In G.L. Martin & S. Ardoin (Eds.), *Social Class Supports: Programs and practices to serve and sustain poor and working-class students through higher education*, (pp. 169-180). Stylus.
- OpenDOAR. (2022). [https://v2.sherpa.ac.uk/view/repository\\_visualisations/1.html](https://v2.sherpa.ac.uk/view/repository_visualisations/1.html), May 23, 2022
- Piwowar H, Priem J, Larivière V, Alperin JP, Matthias L, Norlander B, Farley A, West J, Haustein S. (2018). The state of OA: A large-scale analysis of the prevalence and impact of Open Access articles. *PeerJ* <https://doi.org/10.7717/peerj.4375>
- Seaman, J.E., & Seaman, J. (2017). Opening the Textbook: Educational Resources in U.S. Higher Education. <https://files.eric.ed.gov/fulltext/ED582411.pdf>
- Seaman, J. E., & Seaman, J. (2022). *Turning Point for Digital Curricula: Educational Resources in U.S. Higher Education, 2022*. Retrieved from <https://www.bayviewanalytics.com/reports/turningpointdigitalcurricula.pdf>
- Tenopir, C., Volentine, R., & King, D. (2012). Article and book reading patterns of scholars: Findings for publishers. *Learned Publishing*, 25(4), 279-291. <http://dx.doi.org/10.1087/20120407>
- Tillinghast, B. (2020). Developing an open educational resource and exploring OER-enabled pedagogy in Higher Education. *IAFOR Journal of Education*, 8(2), 159–174. <https://doi.org/10.22492/ije.8.2.09>

Todorinova, L., & Wilkinson, Z. T. (2020). Incentivizing faculty for open educational resources (OER) adoption and open textbook authoring. *The Journal of Academic Librarianship*, 46(6). <https://doi.org/10.1016/j.acalib.2020.102220>

Zimmer, W.K., & Keiper, P. (2021). Redesigning curriculum at the higher education level: challenges and successes within a sport management program. *Educational Action Research*, 29(2), 276-291. DOI: 10.1080/09650792.2020.1727348

## Appendix Survey Instrument

For the purposes of this survey, please think about a syllabus for a course you are teaching or have taught in the last year.

Q1 What college(s) is this course affiliated with?

Q2 What is the level of the course?

- Undergraduate
- Graduate

Q3 How is the course delivered?

- Online
- Face to face
- Combination

Q4 How many times have you taught this course?

- This is the first time
- 2-4 times
- More than 4 times

Q5 How many years have you been an instructor?

Q6 How long has it been since you updated the reading assignments for this course?

- I created this course for this semester
- I updated the reading assignments for this semester
- I updated the reading assignments for a previous semester
- I have not updated the reading assignments

Q7 Did you assign any books on your syllabus? (Meaning students should read all or most of the book, not just a chapter or two)

Q8 How many of the books on the syllabus did you identify using each of these methods?

- Adopted a book from a colleague's syllabus
- Assigned a book I knew about through keeping up with literature in my field
- Searched for books on the course topic

Q9 Which, if any, of these factors did you consider when choosing a book(s) for this course?

- Cost to purchase
- Availability through the library
- Open access availability



- None of the above

Q10 Did you assign any book chapters for this course? (For this question, do not consider books you asked students to read extensively, just chapters where only a small portion of the book was assigned)

Q11 How many of the chapter readings on the syllabus did you identify using each of these methods?

- Adopted from a colleague's syllabus
- Assigned a chapter I was familiar with through keeping up with literature in my field
- Searched for information on the topic

Q12 Which, if any, of these factors did you consider when choosing chapters for this course? Mark all that apply

- Cost to purchase
- Availability through the library
- Open access availability
- None of the above

Q13 Did you assign any articles for this course?

Q14 How many of the article readings on the syllabus did you identify using each of these methods?

- Adopted an article from a colleague's syllabus
- Assigned an article I was familiar with through keeping up with literature in my field
- Searched for articles on the topic

Q15 Which, if any, of these factors did you consider when choosing articles for this course? Mark all that apply

- Cost to purchase
- Availability through the library
- Open access availability
- None of the above

Q16 Did you assign any media on your syllabus? (Videos, music recordings, podcasts, etc.)

Q17 What percent of the audiovisual media assignments on your syllabus did you identify using each of these methods?

- Adopted media from a colleague's syllabus
- Assigned media I was familiar with through keeping up with information in my field
- Searched for media on the topic

Q18 Which, if any, of these factors did you consider when choosing audiovisual media resources? Mark all that apply

- Cost to purchase
- Availability through the library
- Open access availability
- None of the above

Q19 Did you consult a librarian or library staff member regarding your reading assignments before teaching the course?

- Yes, before this semester
- Yes, in a previous semester
- No

Q20 Do you have anything else you would like librarians to know about how you develop and update reading lists for your courses?