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Editorial

Embracing an Open Future

Rachel Scott and Michael Fernandez

This issue of *LRTS* marks the first under the guidance of the new editorial team, and we'd like to take this opportunity to introduce ourselves, describe the work we are currently undertaking, and look ahead towards our goals for this publication. We are both pleased to work with our colleagues throughout the profession to ensure that *LRTS* remains integral to the scholarship and practice of library collections, technical services, scholarly communication, and related areas. *LRTS* is in a time of transition. We began our work in March and have since finalized the editorial board, familiarized ourselves with the articles under review, and met with a variety of groups in the Core shared governance structure. Core is still a young organization and the editorial staff of the three Core journals—*Information Technology and Libraries, Library Leadership & Management*, and *LRTS*—have been given the charge of bringing the journals into alignment. Among other things, this will mean implementing a shared procedure to facilitate name change requests and, eventually, migrating all journals to a unified platform. Importantly, it will also mean that *LRTS* content will be free to read with no embargo beginning in 2023.

Both *Information Technology and Libraries* and *Library Leadership & Management* have operated as platinum open access journals for several years. *LRTS* accordingly has a bit of catching up to do! Considering that *LRTS* engages with scholarly communication, library collections, and acquiring, making discoverable, and preserving the scholarly record, we see this as an important opportunity for the journal to practice what it preaches and model the kind of change toward openness that we would like the scholarly publishing community to embrace. The pace of change is rapid within technical services and comfort with ambiguity and openness only grows in importance. The specifics of funding and maintaining open access publishing for Core journals are still under discussion, and we are excited to navigate the implementation of a sustainable open access model with input from the Core community. As these details become finalized we will, of course, be happy to share the good news with our readership, so watch this space! We are very much looking forward to this change that will broaden the reach of the scholarship and research being produced by *LRTS* contributors.

Speaking of which, we are grateful to all of those who contributed to this issue—the authors, anonymous reviewers, and our predecessors Mary Beth Weber and Elyssa Gould—and we hope that you will find this issue beneficial to your practice and understanding.

In this issue of *LRTS*:

- Lindsey Lowry shares the results of a survey that considers "Soft Skills for Technical Services Professionals in the Academic Library." The findings show that interpersonal communication and teamwork skills are perceived as essential to technical services work and reiterate that despite persistent stereotypes suggesting otherwise, technical services employees are collaborative and service oriented.

- Damla Yılmaz and Yurdagül Ünal offer an analysis of "Evidence-Based Acquisition at Hacettepe University Libraries" focused on that institution's EBA plan for Cambridge University Press e-books. The authors find that although over half of the collection consisted of general research monographs and only 27 percent of coursebooks, both the unique books used and total usage favored coursebooks (47 percent and 62 percent, respectively) to general research books (41 percent and 29 percent, respectively).
- Book reviews

Soft Skills for Technical Services Professionals in the Academic Library

Lindsey Lowry

The stereotype of the "behind the scenes" technical services librarian lends credence to the idea that librarians working in cataloging, acquisitions, collection development, etc., work alone and independently, never to face the patron or engage with their colleagues. Though that exaggerated typecast may still live on in the minds of some, the more contemporary and holistic approach to library organization, where librarians in all subfields benefit from a cross-sectional skillset, has necessitated that all librarians master the soft skills needed to work well with the patron and with others. This study examines both the frequency with which librarians in technical services interact with others in the course of their job duties as well as the nature and importance of soft skills in the academic library technical services workplace.

Historically, librarians have been perceived as being part of a binary coupling in which one belonged to either a group that communicates with and directly assists the patron or, conversely, a group that grapples with bibliographic principles and data, perhaps ensconced in the recesses of the building. The differences between library public services and library technical services could be summed up in this perceived division of duties, and since the 1970s, librarians have written and opined about this division. In 1979, Gorman argued that libraries should rethink the "primal division" between the two roles and proposed a new method for library organization going into the 1980s to break the dichotomy between the two groups.[1] In 2015, Hiatt echoed that this "false dichotomy" of public services and the contrary technical services still existed despite the rapid evolution of library services by reiterating that "technical services *is* public services," though staff still like to separate those who work "with patrons" and those who "do 'back office' work" into the groups.[2]

Though discussions of breaking down the siloes that exist between public services and technical services has endured over time, the rise of electronic resources and the digital tools to access them now allow for and necessitate a more holistic approach to library services in which all librarians benefit from a skill set that crosses the technical services/public services divide. Specifically soft skills, defined by the Oxford English Dictionary as "abilities which enable effective communication and social interaction with other people," have been shown to be desirable and in demand for all librarians through studies of position announcements, hiring practices, and surveys of practicing professionals.[3] Specific to technical services, institutions have shown an increasing desire to hire librarians who demonstrate a mastery of soft skills beneficial for a collaborative work environment in addition to the necessary technical or domain-specific skills of the technical services librarian.[4]

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Even so, the literature has not established to what extent librarians in technical services roles typically interact or collaborate with others, which soft skills are of the most importance to their work, or what training they have had to acquire or hone these types of skills. To this end, the author sought to understand the presence and nature of soft skills in the technical services workplace and created a questionnaire to distribute to current librarians working in the technical services subfield in academic or research libraries. Through this questionnaire, the author hoped to answer the following research questions:

- What level of interaction or collaboration do librarians in technical services roles have with patrons, colleagues, consortia members, and others?
- What level of importance do library professionals in technical services place on certain soft skills, and where do those soft skills come into play in the course of their regular job duties?
- To what extent have librarians in technical services had experience and/or training to help acquire or hone soft skills?

Literature Review

Defining Soft Skills

Authors in the discipline have either crafted their own definitions of soft skills or provided more nebulous descriptions or definitions of soft skills for librarians. Some coined these types of skills as emotional intelligence or interpersonal skills, but perhaps Baril and Donley, in their study of academic librarian job descriptions, elucidated the definition most concisely in noting that "by and large, soft skills are the most commonly referenced term for non-technical skills, which is perhaps the most simplistic definition."[5] Unfortunately, there is no concrete or agreed-upon definition of what constitutes a soft skill, but rather, instead, what Decker called "generalizable terms that appear in numerous articles" and what Cobb, Meixelsperger, and Seitz called skills that are "ineffable and difficult to measure."[6] Matteson, Anderson, and Boyden likewise described soft skills as a "catchy but ambiguous" phrase, with "little agreement on meaning."[7]

Teaching and Learning

Interestingly, articles on professional development and in-house employee training to hone soft skills are few and far between, likely due at least in part to the imprecise definition of a soft skill and the difficulty of measuring outcomes. In a focus group conducted by Saunders, participants posited that "trying to teach interpersonal skills on the job is challenging," with one participant in the study noting that those with the most successful library employees were typically those that had worked in other service positions in the past, such as retail or food service, and those that "learned to deal with customers."[8]

Likewise, some authors have noted that soft skills are not taught or should be taught in library and information science (LIS) programs.[9] Matteson et al. asks if soft skills "are not clearly articulated, and if targeted training to develop them is rare, how are librarians to reach their fullest potential in offering high quality service?"[10] Some solutions have been offered wherein library professionals can be trained in soft skills, such as professional workshops, cross-training, or other development opportunities, but many also see it as the job of LIS education programs to prepare students with the skills needed for the workforce. Saunders suggests that for any skill, on-the-job training in libraries is rare, and that LIS students and employers rely on LIS programs to prepare students for the workforce.[11] However, Saunders goes on to state that LIS faculty would need to make a dedicated effort to adapt curricula to meet the needs of both employers and students, and that faculty would need to think creatively to incorporate soft skills into the curricula, as they can be quite difficult to teach.[12] Matteson et al. also noted the need for LIS coursework to have instructional materials that help develop soft skills, offering an idea for a modular course.[13] Outside of one's formal education, Cobb et al. posited that soft skills "might be developed before students enter the workforce through participation in an active professional student organization."[14] Mullins, in a study of hiring practices of library deans and directors, found that those interviewed conceded that the general preparation of LIS program graduates varied greatly depending on the school, and that participants in the study indicated the need for an investment in training for new librarians, whether that be formal training, mentorship, or simply investment in professional development opportunities.[15]

Core Competencies and Job Skills

Though many authors have agreed that soft skills are vague or immeasurable, they are still desired or required by hiring managers looking to fill library positions and codified in many core competencies documents. The American Library Association (ALA) finalized the Core Competencies of Librarianship in 2009 to codify the basic knowledge and skills that all librarians should possess. Other core competencies pertaining to librarians in subfields such as cataloging, acquisitions, and electronic resources management exist supplementary to the broader competencies outlined by ALA in 2009, and in many of these can be found reference to soft skills necessary for the effective professional

librarian. For instance, the Core Competencies for Cataloging and Metadata Professional Librarians, finalized in 2017, highlights the need for professionals to have knowledge and skills related to interpersonal communication as well as a "public service orientation," described as one who "recognizes multiple cultures and diverse populations," "prioritizes user needs," and "values diverse viewpoints and ways of doing things."[16] Further, the Core Competencies for Electronic Resources Librarians, codified by NASIG, likewise highlights the need for electronic resources librarians who demonstrate effective communication skills by "communicating effectively, promptly, and consistently, verbally and in writing, with a broad range of internal and external audiences."[17] These core competencies likewise call for librarians who can provide "excellent customer service to a diverse population of users through a variety of communication methods."[18]

Aside from the codified competencies of professional organizations, a wealth of literature has been written on the skills and proficiencies needed, desired, or possessed by professional librarians. Gibson notes that "In the past, many technical services departments placed a greater emphasis on the hard or technical skills rather than soft skills" and goes on to elucidate that this practice is not sustainable, and it is soft skills that are needed to "develop effective working relationships that allow for the anticipation of user needs rather than reacting to a question or inquiry."[19] Moreover, in a survey of over 2,400 library professionals, soft skills such as interpersonal communication skills as well as customer service skills were identified by academic librarians as core to the profession, with 89 percent and 67 percent of librarians identifying them as such, respectively.[20] Other skills based in communication, such as "interacting with diverse communities" and "reference interview/question negotiation" also ranked highly as core to the profession by academic librarians in Saunders's study.[21] Similarly, Zhu found that in technical services departments, communication skills and interpersonal/human relations skills ranked first and sixth, respectively, out of the ten most frequently required skills for professional positions.[22] Hall-Ellis also found that, among entry-level position announcements for metadata or cataloging librarians in university libraries, 45.7 percent of employers required "excellent" verbal and written communication skills and 27 percent required "excellent" interpersonal skills.[23]

More specifically, Davis's study on technical services functions in large research university libraries indicated that while "hard skills" like programming or data management were among the most desirable skills in technical services, a number of "soft skills," like interpersonal skills and communication skills, were also highly desired.[24] Davis notes that "In the past, certain soft skills—for example, the ability to work independently—were required in technical services, but today there are a larger number and a wider variety of soft skills that are desirable."[25] Davis goes on to assert that there exists a skill gap between those that currently work in technical services and skills "that are needed for new and emerging technical services functions."[26] In short, librarians in technical services functions are increasingly expected to work as a team rather than independently, as they may have done in the past.

Moreover, Partridge, Lee, and Munro conducted focus group sessions with library and information science professionals and identified prevalent themes that flowed throughout the discussions about what skills the "Librarian 2.0" would need to be successful. Soft skills like communication, collaboration and teamwork, a user focus, and specific personal traits were identified as key issues that permeated the participants' discussions.[27] Likewise, Han and Hswe found that communication skills as well as collaboration and teamwork were the most prevalent performance-related skills listed as "required" on position announcements for both metadata librarians and cataloging librarians.[28] Finally, Boydston and Leysen note that participants in their study indicated future catalogers will need "flexibility and the willingness to adapt to a changing collaborative environment" as well as the "ability to learn and adjust quickly to new arenas."[29]

Furthermore, there is no dearth of studies in library literature examining library job advertisements either broadly or specific to certain job roles, and many of those studies focus on the skills required for applicants and include, at least tangentially, those skills that could be considered soft skills. For instance, in a study of job advertisements for metadata and cataloging positions, Hall-Ellis noted that "The 21st century participatory, team environment in technical services departments, and bibliographic control divisions support employers' requirements for individuals who have above average interpersonal relationships with colleagues."[30] Promís examined job advertisements posted in 2005–2006 with the specific goal of determining the prevalence of soft skills in job advertisements, finding that soft skills that were once valued primarily in leadership positions "are now essential at all levels of the professional workforce."[31] Dieckman, in a study of job advertisements for serials catalogers, found that 71 percent of advertisements either required or preferred that applicants have interpersonal/communication skills and 64 percent either required or preferred applicants had teamwork/collaboration skills.[32] Further, Han and Hswe's study of cataloging librarian and metadata librarian job announcements noted that communication skills, teamwork skills, interpersonal skills, organizational skills, and flexibility were among the soft skills noted in the job advertisements studied.[33] Geckle and Nelson in examining job ads for cataloging or metadata services used the term "evaluative adjectives" to refer to

characteristics such as "collaborative, knowledgeable, service-oriented, dynamic, creative, energetic, self-motivated, [and] enthusiastic."[34] While not a job ad analysis, similar to the studies mentioned here, Mullins conducted interviews with library administrators (deans, directors, or university librarians) about hiring practices, finding that most were looking to fill new positions with applicants that had curiosity, adaptability, flexibility, and confidence, among other skills.[35]

Soft Skills vs. Emotional Intelligence

Though the phrase "soft skills" lacks formal definition or codification, some articles have equated the concept of emotional intelligence to soft skills for librarians. For example, Promís found that most job advertisements examined were created to attract applicants with certain "hard skills" rather than individuals with a high degree of emotional intelligence.[36] Hernon and Rossiter's study of job advertisements and accompanying survey of library directors examined a wide scope of traits related to emotional intelligence and leadership, how job advertisements portray them, and how library directors acquire those skills or intelligences.[37] Likewise, Lucas examined hiring practices, training, change management, and more as it pertained to emotional intelligence and soft skills for librarians, positing that librarians looking to expand their knowledge of emotional intelligence and library leadership must look toward the business literature in addition to the library literature to move forward.[38] Klare, Behney, and Kenney also touched on the subject of library literature and emotional intelligence, suggesting that the library literature is "limited in scope" and only focuses on emotional intelligence as it pertains to library leadership while largely ignoring emotional intelligence as it pertains to entry-level or non-leadership library positions.[39] Indeed, much of the library literature dedicated to emotional intelligence pertains specifically to its relationship with leadership rather than to non-leadership or management positions.

Soft Skills and Technical Services in the Literature

Literature specifically pertaining to soft skills and librarians in technical services is sparse, and most discussion of the topic takes place as part of a larger study or as a tangential narrative to the study of organizational structures of traditional technical services departments or skill sets in general. For instance, Zhu studied skills and roles of paraprofessionals in library technical services departments, and while the study revealed frequently required skills and training needed by both professionals and paraprofessionals, as well as incentives for professional development for these skills, little differentiation or discussion was made to address soft skills specifically.[40] Davis's study tangentially addressed hard skills and soft skills for technical services staff as a part of a larger study on technical services functions and organizational structures.[41] Further, Gibson, in an article about emerging roles for librarians in technical services, briefly asserted the need for soft skills in the technical services workplace in a larger context wherein they outlined the shift of library services from "problem solvers to solution creators."[42]

Methodology

The scholarly study of soft skills, in general, is complicated by the lack of a formal definition of the phrase. Therefore, to study the nature and presence of soft skills in the technical services workplace, and in the absence of an agreed-upon definition or taxonomy, the author chose to undertake the study using the seven soft skills identified as "core" to the library profession in a 2020 study by Saunders as the foundation for examining soft skills in the technical services subfield of librarianship. Saunders's study identified ten "knowledge, skills, and abilities" (or KSAs) that more than 50 percent of respondents indicated were "core" to the library profession, seven of which Saunders noted could be considered soft skills rather than domain specific or technical.[43] Those "core" skills are

1. reflective practice grounded in diversity and inclusion;
2. interacting with diverse communities;
3. cultural competence;
4. customer service skills;
5. teamwork;
6. writing; and
7. interpersonal communication.[44]

To gather a sample of respondents, the author sought to target participants for the study who worked in libraries in technical services roles. Instead of pre-identifying which job duties or titles were considered part of technical services, respondents were permitted to self-identify as working in a technical services role and given the opportunity in the survey to further identify what roles and duties they were assigned. Moreover, the questionnaire was not limited to participants with the job title of "librarian," but rather was open to any person working in a library technical services environment, regardless of their role. However, for clarity's sake, the author uses the term "librarian" here as meaning any person employed in a library setting regardless of role.

After study approval from the University of Alabama Internal Review Board, the author built the questionnaire in Qualtrics and distributed a call for participants to various professional discussion lists and forums identified by

the author as appropriate for targeting potential participants, i.e., those librarians working in academic or research libraries in the technical services subfield. Distribution of the call for participants included posts on electronic discussion lists for members of the Association of College and Research Libraries (ACRL) Technical Services Interest Group, the American Library Association's (ALA) Core member discussion forum, as well as four, e-mail-based discussion lists: SERIALST, Electronic Resources in Libraries (ERIL), OCLC CAT, and OCLC ILL. To maintain confidentiality of participants, no identifying data were collected, and participants were encouraged to refrain from entering any identifiable information in any free-text field of the survey. See the appendix for full text of the questionnaire.

After distribution, the survey was open for responses from October 7 to October 20, 2021, with no further responses collected after the closing date. After the questionnaire was closed, all responses that were less than 85 percent complete were removed from the sample. The final sample size of 220 responses provided a confidence level of 95 percent with a confidence interval of ± 6.61. Except for two demographic questions, every question in the survey was optional. Therefore the total number of responses to each question varies slightly and may not capture 100 percent of the full sample.

Results

Demographics

An overwhelming number of responses in the survey were from participants identifying as female at 86 percent. Nontenure-track librarians made up 44 percent (n = 96) of the sample followed by library staff at 32 percent (n = 71) and tenured/tenure-track librarians (24 percent or n = 52). Likewise, most respondents (66 percent or n = 146) were employed by a doctoral granting college or university. Further, respondents represented a thorough cross-section of years spent in the profession with between 14 percent and 16 percent of the sample being represented in each category with a slightly higher percentage of participants indicating twenty-five or more years spent in the profession (25 percent or n = 56).

A cross-section of primary job duties was also indicated in the sample, and participants could select more than one to accommodate professionals who may have multiple areas of responsibility within technical services. Thirty-eight percent (n = 84) selected only one primary job duty of fourteen and a further 27 percent selected two. Eighteen (8 percent) respondents reported more than four primary job duties with one person selecting nine out of fourteen options.

Table 1. Primary Job Duty, N = 220

	n =	%
Cataloging and Metadata Management	120	55
Electronic Resources Management and/or Licensing	81	37
Acquisitions/Collection Development	79	36
Receiving and/or physical processing of materials	40	18
Department Head	39	18
Discovery	32	15
ILL and Document Delivery	28	13
Systems and/or Web Services	26	12
Assessment	16	7
Administration	14	6
Government Documents	12	5
Other	10	5
Institutional Repository	9	4
Scholarly Communication/Copyright	5	2

More than half of respondents indicated a primary job duty of cataloging and metadata management (55 percent or n = 120) followed by over one-third of respondents indicating electronic resources management/licensing (37 percent or n = 81) and acquisitions and/or collection development (36 percent or n = 79). See table 1. The number of students served by institution ranged widely from 100 to 200,000, while 38 percent (n = 84) of respondents indicated employment with an institution that is a part of the Association of Research Libraries (ARL).

Interacting and Collaborating with Others

The respondents' frequency with which they interact with library patrons skews slightly toward rare or occasional interactions, while a smaller portion (26 percent or n = 57), indicated that they frequently or very frequently interact with library patrons. Conversely, collaborating with other librarians and staff appears to be quite common, as 74 percent (n = 163) of respondents reported collaborating either frequently or very frequently with other librarians and staff. In fact, zero respondents indicated that they never collaborate with others and only eleven respondents (5 percent) indicated that they rarely collaborate. Furthermore, the frequency with which respondents work or interact with vendors, colleagues outside of the institution, or consortia members varied, with 46 percent (n = 101) of participants indicating that this occurs frequently or very frequently and only 3 percent (n = 6) indicating that interaction with vendors, consortia members, or outside colleagues never occurs. See table 2.

Table 2. Frequency of interaction with different groups by job duty, N = 220

		Patrons					Employees					Vendors or Colleagues				
Job Duty	*n* =	N	R	O	F	VF	N	R	O	F	VF	N	R	O	F	VF
Cataloging and/or Metadata Management	120	8%	48%	20%	18%	7%	0%	4%	25%	44%	27%	5%	20%	46%	22%	8%
Acquisitions and/or Collection Development	79	1%	38%	37%	19%	5%	0%	5%	15%	53%	27%	0%	6%	24%	41%	29%
Receiving and/or physical processing of materials	40	3%	35%	23%	30%	10%	0%	10%	18%	45%	28%	0%	20%	45%	20%	15%
Electronic Resources Management and/or Licensing	81	3%	32%	40%	22%	4%	0%	6%	14%	41%	40%	0%	5%	26%	38%	31%
Discovery	32	0%	44%	31%	22%	3%	0%	6%	16%	38%	41%	0%	0%	31%	44%	25%
Systems and/or Web Services	26	0%	39%	31%	23%	8%	0%	12%	15%	42%	31%	0%	4%	50%	31%	15%
ILL and/or Document Delivery	28	4%	14%	25%	39%	18%	0%	11%	25%	36%	29%	0%	29%	32%	36%	4%
Institutional Respository	9	0%	44%	33%	22%	0%	0%	0%	22%	44%	33%	11%	33%	22%	33%	0%
Scholarly Communication /Copyright	5	0%	40%	20%	20%	20%	0%	0%	40%	20%	40%	0%	80%	0%	20%	0%
Assessment	16	0%	50%	38%	6%	6%	0%	6%	13%	38%	44%	0%	0%	25%	50%	25%
Government Documents	12	0%	33%	33%	33%	0%	0%	0%	33%	42%	25%	0%	33%	33%	17%	17%
Department Head	39	5%	36%	39%	18%	3%	0%	0%	5%	28%	67%	0%	0%	21%	51%	28%
Administration	14	7%	14%	29%	43%	7%	0%	0%	7%	29%	64%	0%	7%	7%	57%	29%
Other	10	20%	40%	30%	10%	0%	0%	0%	30%	60%	10%	0%	20%	20%	30%	30%

Participants were permitted to select more than one job duty resulting in N=551 total responses
Percentages calculated within n value of each job duty
N: Never, R: Rarely, O: Occasionally, F: Frequently, VF: Very Frequently

Table 3. Importance of Soft Skills, N = 220

	Not at all important		Slightly important		Moderately important		Very important		Extremely important	
Soft Skills	*n* =	%	*n* =	%	*n* =	%	*n* =	%	*n* =	%
Ability to interact with diverse communities	2	1%	21	10%	38	17%	91	41%	68	31%
Cultural Competence	5	2%	18	8%	47	21%	83	38%	67	30%
Customer Service	3	1%	19	9%	33	15%	73	33%	92	42%
Teamwork	0	0%	2	1%	20	9%	77	35%	120	55%
Writing	0	0%	9	4%	38	17%	102	47%	70	32%
Interpersonal Communication Skills	0	0%	3	1%	10	5%	88	40%	119	54%
Ability to engage in reflective practice grounded in diversity and inclusion	12	5%	21	10%	49	22%	79	36%	59	27%

Importance of the Seven Soft Skills

Respondents were asked to rate the importance of the seven soft skills identified by Saunders as it pertains to their respective job duties. Interpersonal communication skills and teamwork skills were shown to be of greatest importance to respondents, with 94 percent (n = 207) of respondents rating interpersonal communication skills and 90 percent (n = 157) rating teamwork skills as very important or extremely important. No respondents indicated that interpersonal communication, writing, and teamwork skills were not at all important, though 5 percent of respondents (n = 12) did indicate that the ability to engage in reflective practice grounded in diversity and inclusion was not at all important. See table 3.

Training

An average of 46 percent of respondents had received workplace training for at least one of the soft skills being

Table 4. Where would you say you likely acquired the soft skills listed below? N = 220

	My Education		Previous Job Experience		Personal Experience		Professional Development or Formal Training		Other		Unsure/ Not Applicable	
Soft Skills	*n* =	%	*n* =	%	*n* =	%	*n* =	%	*n* =	%	*n* =	%
Ability to interact with diverse communities	57	26%	110	50%	175	80%	96	44%	13	6%	8	4%
Cultural Competence	68	31%	79	36%	165	75%	80	36%	13	6%	14	6%
Customer Service	20	9%	175	80%	113	51%	55	25%	7	3%	4	2%
Teamwork	92	42%	155	70%	152	69%	63	29%	6	3%	3	1%
Writing	183	83%	73	33%	116	53%	35	16%	8	4%	2	1%
Interpersonal Communication Skills	85	39%	148	67%	191	87%	62	28%	14	6%	3	1%
Ability to engage in reflective practice grounded in diversity and inclusion	45	20%	49	22%	123	56%	97	44%	17	8%	41	19%

studied. A majority of respondents had received training associated with interacting with diverse communities (66 percent or n = 146) and just over half (54 percent or n = 119) reported receiving training in the ability to engage in reflective practice grounded in diversity and inclusion. Conversely, 84 percent (n = 185) of respondents indicated that they had never received on-the-job training to hone writing skills, and only half (50 percent or n = 110) indicated having received on-the-job training in teamwork skills. Likewise, a little under half had received training in customer service skills (47 percent or n = 113). See table 4.

Education and Soft Skills

Seventy-three percent (n = 160) of respondents indicated that their formal education contributed "a great deal" or "a significant amount" to their mastery of writing skills, but for the other soft skills, responses were not so positive. Only 14 percent (n = 31) of respondents indicated that their formal education helped them master skills in customer service either "a great deal" or "a significant amount." Likewise, 58 percent (n = 126) indicated that their education contributed "only slightly" or "not at all" to their mastery of the ability to engage in reflective practice grounded in diversity and inclusion. See table 5. Participants were also asked where they acquired each of the soft skills being measured and were permitted to select more than one answer. Of note in the results, the highest percentage of respondents indicated that each of the seven soft skills was acquired through personal experience, with more that 50 percent of respondents indicating as such for every soft skill.

Open-Ended Questions

Participants were asked two open-ended questions, the first of which aimed to ascertain which of the seven soft skills being studied was considered of most importance or "paramount" to job success. Of the 195 respondents that answered this question, more than 120 indicated that interpersonal communication skills are of paramount importance to their job success. Ninety-two respondents indicated that teamwork skills were also of paramount importance, followed by customer service skills wherein seventy respondents indicated a high degree of importance. Only three respondents indicated that none of the soft skills were important, and twelve respondents indicated that all of them were paramount.

The second open-ended question asked participants what soft skills, other than the ones being studied, were "core" or important to respondents' individual job duties. For this question, the author inductively created a coding schema of key words and phrases mentioned in the free text provided by participants to classify answers, resulting in thirty-three different categories of soft skills. Within the 180 responses to this question, the most frequently mentioned soft skills considered "core" were empathy, time management, and flexibility/adaptability. Problem solving, emotional intelligence, and listening skills were also mentioned frequently. Interestingly, twelve respondents indicated that listening skills were "core" or important to their job duties. One respondent said "presentation and listening skills are also incredibly important for a technical services job. Though many positions in TS [technical services] do not actively engage in teaching information literacy to students, we do have to present out work to stakeholders to establish the importance of our work and advocate for our departments." Other respondents specifically reiterated that active listening or constructive listening was important for making sure that others feel heard and being certain that one has taken the time to fully understand the information being

Table 5. To what extent did your formal, post-secondary education (Bachelor's Degree, Master's Degree, PhD or other) contribute to your mastery of the following soft skills? N = 220

	A Great Deal		A Significant Amount		Somewhat		Only slightly		Not at all		Unsure	
Soft Skills	*n* =	%	*n* =	%	*n* =	%	*n* =	%	*n* =	%	*n* =	%
Ability to interact with diverse communities	20	9%	40	18%	59	27%	42	19%	52	24%	5	2%
Cultural Competence	17	8%	43	20%	64	29%	35	16%	54	25%	5	2%
Customer Service	8	4%	23	10%	64	29%	58	26%	63	29%	1	0%
Teamwork	19	9%	57	26%	76	35%	40	18%	22	10%	4	2%
Writing	75	34%	85	39%	38	17%	11	5%	10	5%	0	0%
Interpersonal Communication Skills	23	10%	51	23%	85	39%	34	15%	24	11%	1	0%
Ability to engage in reflective practice grounded in diversity and inclusion	12	5%	36	16%	36	16%	49	22%	77	35%	9	4%

conveyed so that appropriate action can be taken. Some participants did repeat the importance of the soft skills being studied as "core" to job duties, but these were not classified in the coding schema. Some respondents to this question did point out that a few soft skills mentioned could be subsumed by ones already mentioned in the study that were broader such as interpersonal communication skills. Indeed, there exists a lot of overlap in definition of each skill, making analysis more difficult. One respondent noted that all soft skills "form a pyramid that supports the goal of 'excellent customer service.'"

Discussion

The results of this study highlight the frequent interactions and high rate of collaboration that occurs in the course of technical services work, despite the notion that technical services work necessitates a solitary job setting with the requirement that a professional work very independently. Respondents reported frequent work with those outside of their institution, including vendors, peer colleagues, or consortia members in addition to frequent collaboration or interaction with colleagues. Interestingly, many respondents indicated a blending of primary job responsibilities across the library, some of which were duties outside of the traditional technical services scope such as reference or instruction. While the sample size is too small to accurately determine when and how often professionals with certain job duties interact with patrons, vendors, or colleagues, the results provide an interesting foundation for further study to see which job duties require the most and least interaction or collaboration with others.

Moreover, the importance placed on teamwork skills by respondents in this study correlates with the high rate of collaboration reported between technical services professionals and colleagues and corroborates the findings of other studies. It further underscores the necessity and desirability of this skill for those working in technical services and confirms the importance of the ability to work well in a team environment as other studies have indicated.[45] Indeed, technical services work has become very team-based over time, making the ability to collaborate effectively and work as a team increasingly desirable. Dieckman's study of job ads for serials catalogers validates the results here, demonstrating that 64 percent of job ads studied included requirements or preferences for a candidate to possess skills in teamwork/collaboration.[46] Hall-Ellis also indicated that 64 percent of job descriptions studied for entry-level metadata positions indicated that new hires are expected to have the ability to work in teams.[47] Davis's study on technical services functions also illuminated the collaborative work needed to perform the complex tasks associated with acquiring and managing library materials as library collections and functions have evolved.[48] Indeed, excellent teamwork skills seem to be a highly desired trait for those employed or looking to be employed in library technical services.

All seven soft skills studied were rated as very important or extremely important by over half of respondents, with very few participants indicating that any of these soft skills was not important or only somewhat important. These results further underscore the findings of Saunders's broader study on core skills for librarians and put the priorities of technical services professionals in perspective to others in other subfields. For example, interpersonal communication skills were ranked highest in importance in both Saunders's study and the present study. In effect, though, the phrase "interpersonal communication skills" could encompass a broader scope of applicable skills than others such as writing and teamwork. In fact, the phrase could be construed as encompassing writing, teamwork, and other soft skills, which may account for the high percentage of respondents who deemed this skill of utmost importance.

Customer service skills were also rated quite highly by participants as either very important or extremely important. This result coupled with the result that 69 percent of respondents reported only rarely or occasionally interacting with patrons, brings some interesting ideas to light. The author posits that even though the frequency with which technical services professionals interact with patrons tends towards rare or occasional, the importance respondents place on those interactions is very high. Likewise, one could use "customer service skills" with other groups like colleagues, consortia members, etc. Indeed, librarianship is, at its core, a service profession, and from the results of this study, even "behind the scenes" librarians place high regard on the ability to exhibit good customer service skills, even if those interactions are only occasional.

The results also demonstrate the high level of importance placed on the skills related to diversity, equity, and inclusion: cultural competence, the ability to interact with diverse communities, and the ability to engage in reflective practice grounded in diversity and inclusion. These are the skills that must be highly regarded by librarians to maintain an inclusive and diverse environment for all patrons. Indeed, diversity, inclusion, and cultural competence are not limited to the domain of those in public services or face-to-face interactions. Work done in technical services departments, such as collection development, website design, and cataloging and subject description, also has a large and important role to play. If libraries are to address systemic problems while working toward more diverse and inclusive environments, it must be done throughout every corner of library operations, including "behind the scenes." The output of work created by technical services professionals is utilized by patrons each day, and it is beholden to the discipline to ensure that output represents the values of diversity, equity, inclusivity, and social justice wherever possible.

Moreover, a large portion of respondents indicated that those soft skills related to diversity were acquired either through previous job experience or personal experience. This finding closely mimics the findings of Adkins, Virden, and Yier who found that 91 percent of respondents reported learning about diversity through life experience and 85 percent through work experience.[49] All things considered, though, while personal and job experience seem to be a common way in which respondents learn about diversity, equity, and inclusion, other methods of learning are still used and should not be discounted. If nothing else, participants demonstrated that these skills rooted in diversity, equity, and inclusion are learned through multiple pathways.

Interestingly, the results indicate that formal education is not the primary place wherein participants acquired any of the soft skills studied, with the exception of writing skills. More than 50 percent of respondents indicated that each of the soft skills was gained, at least in part, due to personal experience rather than any other method, except for customer service skills which were primarily gained through previous job experience. In fact, one participant in Saunders's study similarly noted that successful library hires often had previous experience in jobs focusing heavily on customer service, such as retail and food service, noting that those jobs might have contributed to a professional's ability "to deal with customers."[50] Indeed, it stands to reason that prior experience in a customer service-oriented position would lend great experience to the library profession, as a service-oriented profession.

Furthermore, the results of this question regarding where soft skills are acquired further underscores what many other authors have touched upon in the past: library science education programs prioritize the development of "hard skills" more so than any soft skills. Many authors have argued for library and information science programs to innovatively prepare students for the workforce by honing the soft skills necessary to work in a library environment but likewise note that such preparation is not common. In fact, Saunders indicated that some soft skills "can be extremely difficult to teach and assess."[51] Cobb et al. posited in 2015 that students in LIS programs might develop soft skills through professional student organizations, noting that "some characteristics which are essential for traditional classroom education are not necessarily conducive to fostering soft skills."[52] Moreover, specific to those soft skills grounded in diversity and inclusion, only 46 percent of respondents in Adkins, Virden, and Yier's study indicated having learned about diversity in their graduate school curriculum, and that participants expressed in an open-ended question the desire for such courses compared with the lack of course offerings.[53]

In an open-ended question, respondents indicated that the most important or "paramount" soft skill to job success was interpersonal communication skills, followed by teamwork skills and customer service skills. The results here closely mimic the results of an earlier question in the study wherein participants ranked the importance of each soft skill and further underscores the importance of interpersonal communication as the most important or desirable of the seven "core" skills. When participants were asked what soft skills outside of those being studied were also "core" or important to job duties, the most frequently mentioned soft skills were empathy, time management, and flexibility or adaptability. Indeed, while empathy could be construed as a part of the broader skill of interpersonal communication that ranked highly among participants, the frequently mentioned skills of time management and flexibility or adaptability make for an interesting analysis. Time management skills are important for any job, and the work of

technical services librarians can be nonlinear, variable, rapidly changing, and can require a certain level of creativity and triage. As new or strange problems inevitably arise with both electronic and print collections, librarians in technical services must meet those challenges with a certain level of prioritization and flexibility to meet the needs of patrons. Along the same line, problem-solving skills ranked quite highly in this question as well. Time management, flexibility/adaptability, as well as problem-solving together paint a picture of what kind of work is expected in a technical services environment and underscore the variable and ever-changing nature of the work.

Finally, the presence of listening skills commonly cited as being "core" to job duties warrants further examination. One respondent pointed out that listening skills were "perhaps subsumed under some of the listed skills [in the survey]," and indeed, one could argue that listening skills could fall under interpersonal communication skills, empathy, or even skills related to diversity, equity, and inclusion. Even so, as twelve respondents recognized, communication is reciprocal. Though soft skill development and research may focus heavily on effective verbal, nonverbal, or written communications, the importance of one's ability to receive and act upon information appropriately and effectively cannot be overstated as a necessary soft skill in the technical services workplace. In fact, one cannot adequately use many other soft skills without the ability to engage in active or constructive listening, as doing so is instrumental to empathy, effectual interpersonal communication, cultural competence, successful teamwork, and many more soft skills. Indeed, the skill of active listening is intertwined with many others but still largely unexplored in the literature.

Limitations

The results of this study are limited in a few ways. First, a larger sample size and response rate would result in a higher confidence level and lower confidence interval. While the study collected meaningful data to generalize about the nature of soft skills with librarians in technical services, a larger sample size would allow for a better, more reliable analysis. Second, the study is limited in scope to only academic library professionals, as responses from those working in public, K-12, or special libraries were not collected or studied. Therefore no claims about library professionals serving in a technical services capacity outside of academic institutions can be made from this data. Further, the author recognizes the difficulty and ambiguity associated with defining "technical services," "soft skills," and even the named, specific soft skills examined in this study. Interpretations and definitions of these concepts were largely left to the respondents. In fact, the questionnaire assumed that respondents would have their own, general idea of the definition of soft skills. A few respondents commented that they had not heard the term "soft skills" before taking the survey, and a few others even identified what one might call "hard skills" or "technical skills" in the open-ended questions. By and large, the author expects that if definitions for these concepts had been provided, results of the survey may have differed.

Conclusion and Further Directions

Though the study population here consisted of technical services professionals in academic libraries rather than encompassing all areas of librarianship, the findings suggest that the soft skills used and valued by technical services professionals are very similar to that of other subfields of librarianship, despite the notion of fundamental differences existing between different areas of concentration. The results also indicate that library professionals in technical services are highly collaborative and service oriented, and the skills learned to succeed at the job are learned largely through personal and job experience rather than through any formal education.

In particular, the author found great interest in the work of Cobb et al. who posited that soft skills for LIS students could be honed through activity in professional student organizations prior to graduation, and future research might examine more closely in what capacities LIS programs help students with the mastery of these and other soft skills.[54] Considering the results of this study, it is the opinion of the author that more experience in the library workplace through internships, apprenticeships, or the like prior to completion of an LIS degree might be the most significant way that students could gain mastery of important or "core" soft skills. As a majority of respondents indicated that soft skills were gained through personal experience, it seems that LIS programs could capitalize on the benefits of real-world experiences for students by offering such opportunities to complement a regular course of study. A study of current classroom or extracurricular activities geared at developing soft skills would be a great addition to the literature.

One important takeaway from this study is the high degree of importance technical services librarians place on soft skills related to diversity, equity, and inclusion, i.e., cultural competence, ability to interact with diverse communities, and the ability to engage in reflective practice grounded in diversity and inclusion. Indeed, addressing systemic bias and injustice is not limited to patron-facing positions. Work done by catalogers, collection developers, web developers, and others has just as an important role to play in fostering diversity, equity, and inclusion in library spaces and the

access to information. It is clear from the results of the study that many technical services librarians recognize that important role. Like the author's previous assertion, the author opines that LIS programs have the opportunity to facilitate the honing of these soft skills in students by offering opportunities for students to face and grapple with real-world scenarios to broaden student skill sets in these areas. Likewise, an investigation of what types of diversity training are offered in LIS programs would make for an interesting study.

The library workplace likewise has a unique opportunity to help develop the soft skills of library staff as they move through their careers by prioritizing and funding continuing education and professional development opportunities. Professional organizations can also provide development opportunities for librarians to work on soft skills through workshops, seminars, or professional conferences. The challenge may be designing such development opportunities, as the mastery and application of these skills may be difficult to define, mimic, and measure. However, considering the importance placed on soft skills by the respondents, the author posits that creating professional development specifically focused on the mastery of soft skills for technical services professionals is a worthwhile endeavor for employers and professional organizations alike. As the world of technical services continues to rapidly evolve, new opportunities for studying, mastering, and even re-defining important soft skills in the subfield may emerge, and as libraries continue to demonstrate an increased desire for librarians to possess a skill set that crosses the public services and technical services divide, more work must be done to provide support for the training and development of library professionals to master those skills.

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Appendix

Q1 I am employed in an academic or research library and consider my primary job duties to be "technical services" duties:
1. Agree
2. Disagree

Q2 Please select your gender identity:
1. Male
2. Female
3. Non-binary / third gender
4. Prefer not to say

Q3 Please select your current job role:
1. Tenured or tenure-track librarian
2. Non tenure-track librarian
3. Library staff

Q4 Approximately how many students does your library serve?

Q5 Type of institution at which you are employed:
1. Two year college (Community College, Junior College, Vocational, etc.)
2. Four year college or university, non-doctoral granting

3. Doctoral granting college or university
4. Other (Please specify)

Q6 Is your library a member of the Association of Research Libraries?
1. Yes
2. No
3. Unsure

Q7 Approximately how long have you been in the profession?
1. 0–5 years
2. 6–10 years
3. 11–15 years
4. 16–20 years
5. 21–25 years
6. 25+ years

Q8 Which of the following best describes your primary job duties? You may select more than one.
1. Cataloging and/or Metadata Management
2. Acquisitions and/or Collection Development
3. Receiving and/or physical processing of materials
4. Electronic Resources Management, and/or Licensing
5. Discovery
6. Systems and/or Web Services
7. ILL and/or Document Delivery
8. Institutional Repository
9. Scholarly Communication/Copyright
10. Assessment
11. Government Documents
12. Department Head
13. Administration
14. Other (please specify)

Q9 About how often do you interact with library patrons (faculty, students, etc.) in the course of your regular job duties?
1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Very Frequently

Q10 About how often do you collaborate with other librarians or staff to complete projects or perform your regular job duties?
1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Very Frequently

Q11 About how often do you work or interact with vendors, colleagues at other institutions, or consortia members in the course of your regular job duties?
1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Very Frequently

Q12 The following questions pertain to the use and utility of certain soft skills for those working primarily in a technical services capacity. There is no concrete or codified definition of the phrase "soft skills." Therefore, the skills listed in the questions below were identified as "core" to the library profession from a previous study by Saunders, the full citation of which you may find below:

Saunders, L. (2020). "Core Knowledge and Specialized Skills in Academic Libraries," *College & Research Libraries*, 81: 288-311. https://doi.org/10.5860/crl.81.2.288.

Q13 In order to perform your job duties effectively, how important is it to have each of these skills listed below?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
Ability to interact with diverse communities					
Cultural competence					
Customer service skills					
Teamwork skills					
Writing skills					
Interpersonal communication skills					
Ability to engage in reflective practice grounded in diversity and inclusion					

Q14 Have you ever received any on-the-job training for the skills listed below while employed at an academic or research library?

	Never received training	Received some training	Unsure
Interacting with diverse communities			
Cultural competence			
Customer service skills			
Teamwork skills			
Writing skills			
Interpersonal communication skills			
Ability to engage in reflective practice grounded in diversity and inclusion			

Q15 To what extent did your formal, post-secondary education (Bachelor's Degree, Master's Degree, PhD or other) contribute to your mastery of the following soft skills?

	A great deal	A significant amount	Somewhat	Only Slightly	Not at all	Unsure
Ability to interact with diverse communities						
Cultural competence						
Customer service skills						
Teamwork skills						
Writing skills						
Interpersonal communication skills						
Ability to engage in reflective practice grounded in diversity and inclusion						

Q16 Where would you say you likely acquired the soft skills listed below? You may select more than one option.

	Through my education	Through previous job experience	Through personal experience	Through professional development or formal training	Other	Unsure/ Not Applicable
Ability to interact with diverse communities						
Cultural competence						
Customer service skills						
Teamwork skills						
Writing skills						
Interpersonal communication skills						
Ability to engage in reflective practice grounded in diversity and inclusion						

Q17 To answer the following questions, consider the seven soft skills listed here as they pertain to your particular job duties:

1. Ability to interact with diverse communities
2. Cultural competence
3. Customer service skills
4. Teamwork skills
5. Writing skills
6. Interpersonal communication skills
7. Ability to engage in reflective practice grounded in diversity and inclusion

Q18 Of the seven soft skills listed here, do any stand out as being paramount to your job success? Which ones and why?

Q19 Aside from those listed here, what other soft skills might you consider as "core" or important to your job duties and why?

Evidence-Based Acquisition at Hacettepe University Libraries

Damla Yılmaz and Yurdagül Ünal

To determine the most suitable acquisition model, or to decide whether or not the model they have already chosen is functioning efficiently and economically, librarians must carry out relevant evaluations of their current or potential acquisition models. In this study, an evaluation of the Cambridge evidence-based acquisition (EBA), was carried out at Hacettepe University Libraries between December 16, 2019, and December 31, 2020. Within the scope of the EBA, the number of e-books opened for access was 35,624, the number of unique books used was 2,462 and the number of the books purchased at the end of the model was 168. In total, the books were used 36,934 times. Ninety-three percent of the books were never used during the EBA model implementation term. While 52 percent of the books opened for access consisted of "books for research," 47 percent of the number of unique books used consisted of "coursebooks." Usage cost per unit was calculated as 0.82 USD, and the average book cost was calculated at 180 USD. Purchasing the books based on their list price was a reason for the high average book cost; nevertheless, one should consider that the entire collection of books was open for access for a year-long period of evaluation. In addition, one should not forget that further usage of e-books from the entire collection would decrease the unit cost of the books in the final purchase. During the implementation term, we observed that the Cambridge EBA Model was a suitable option for Hacettepe University Libraries.

With the development of information and communication technologies e-books have become significant components of academic library collections. However, although they would like their e-book collections to be sustainable, academic libraries have limited purchasing power due to their fixed or decreasing budgets and the increase in publication prices.[1]

Academic librarians are required to evaluate e-book acquisition models, which are constantly changing because of the effects of economic conditions and technological developments, to efficiently manage their budget. The complexity of the acquisition models submitted by the publishers and providers, as well as the diversity and magnitude of library types, prevent the possibility for a single universal model to offer the most suitable choices for all libraries or to be adopted by all publishers.[2]

Publishers, consortia, librarians, and aggregators continue to develop new and innovative solutions in terms of acquisition models. Librarians must evaluate e-book acquisition models meticulously to increase the effectiveness of library

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services, meet user needs at the highest level, and manage budgets effectively and economically. There are different e-book acquisition models, such as purchasing (perpetual access), subscription (access only), renting (pay per use or view), approval plan acquisition, demand-driven acquisition (DDA), and evidence-based acquisition (EBA).[3]

While individual titles or e-book collections are added to library collections perpetually, using a purchasing model, the subscription model offers limited-time access to a collection.[4] A renting model enables limited-time access to individual titles.[5] Using an approval plan acquisition model, electronic and hard-copy sources are acquired automatically based on established criteria.[6] Using patron-driven acquisition (PDA) and demand-driven acquisition (DDA) models, e-books are purchased by libraries after reaching a certain usage threshold.[7] Using an EBA model, an e-book collection determined by the publishing house is opened for access for a specified period of time. At the end of this time, selected titles from the collection are added to the collection of the library perpetually, following the payment of a predetermined fee.

Literature Review

In recent years, in response to challenging budget environments, academic libraries, or in some cases, consortia have begun to experiment with the EBA model offered by various publishers on diverse subjects. There are studies which evaluate the application of this model in libraries, such as a comparison of the EBA models of different publishers, a comparison of EBA models and general e-book collections, and evaluations of EBA final title selection. While the results of the studies reveal the advantageous and successful aspects of the model for libraries and consortia, they also draw attention to some challenges.

Stony Brook University (SBU) Libraries evaluated Springer Nature's EBA model and general STEM e-book collection usage.[8] SBU Libraries implemented the EBA model for engineering and science disciplines from November 2019 to October 2020, and the collection included 3,186 titles published from 2016 to 2018. Of the 3,186 titles, 11.33 percent were used within a twelve-month period. Of the 4,406 STEM titles, 89.20 percent were used from January 2019 to December 2019. This SBU Libraries study revealed that usage of the EBA collection increased in some periods. This increase was explained in the study by the initial publicity devoted to the EBA collection, the change to online education because of COVID-19, and the beginning of a new semester. The increase or decrease of usage in certain periods is not unique to this model. In the study, the authors drew attention to an issue related to final EBA title selection, and stated that not only usage data, but also the type of material should be taken into consideration for selection. In the SBU Libraries, during the final EBA title selection, usage data and the type of material used determined the selection. This SBU study revealed that electronic textbooks can be added to collections, especially during the change to online education during a pandemic period.

The University of Arizona Library used the ProQuest EBA model.[9] Purchases made during the first year of the model implementation, constituted a small part of the total value of the accessible collection. With the data acquired from the collections using the ProQuest EBA model, the authors concluded that some collections were used much more than others, while other collections were used barely, or not at all. The librarians acquired significant experience in implementation processes, creating workflows between different units for easier access. It defined newly added sources to the system, presenting them to users in a timely manner. Some of the primary collection sources were available only outside of the EBA plan. Studies show that other libraries also experienced similar challenges in terms of accessing the collection, adding new titles to the system, and publicizing the model in a timely manner.[10] During the EBA model implementation process, the University of Arizona Library overcame difficulties important for other library administrators to consider in their own search for the best possible acquisition model for their library.

Oklahoma University Libraries evaluated different e-book acquisition models.[11] Usage data from the library was compared with Elsevier's evidence-based selection model (EBS) to determine how closely the approval plan choices and the librarian choices matched user preferences. The authors concluded that librarian choices more closely matched user preferences than the approval plan choices, and results obtained from usage data might be effective in a library's purchasing decisions. Elsevier's EBS model enabled access to a wider book collection under the same budget parameters and proved to be an economical way to increase the number of books instantly accessible to users in the short term. However, libraries should consider not having the flexibility to choose titles during the EBA access period, the necessity for an initial basic financial investment, and accepting the probability of not achieving the expected usage numbers due to access to a single collection under the EBA agreement terms. One may observe from this study that revisions should be allowed to EBA agreement clauses, especially for long-term contracts.

In response to rising costs, limited budgets, and the variety of publisher e-book offerings, the University of British Columbia Library, like other university libraries, invested in EBA programs from Cambridge, Wiley, Taylor & Francis, and CRC Press.[12] The authors found that knowing how much to spend per publisher at the beginning of the program, and being able to control costs,

were advantages of the EBA model. But challenges also presented regarding discovery and access, evaluation and decision-making, and librarian workloads. The EBA model is relatively new, and many librarians are managing this model for the first time. For this reason, they are experiencing heavier workloads.

In a study conducted at the Hong Kong University of Science and Technology (HKUST) Library, a DDA, and Wiley's Online Library (WOL) EBA model were evaluated. The authors found that the use of the WOL EBA model, which offered the best solution in terms of ease of use, discoverability, and relevance, was higher than the DDA model, and that e-journal use increased by approximately 50 percent. Even though it was difficult to prove a causal relationship between them, the researchers believe that the EBA model increased the general study efficiency of WOL, and despite being more expensive for the library, the EBA program was renewed.[13]

There are other studies evaluating the successful implementation of an EBA model. The University of South Florida (USF) Library uses multiple DDA and EBA e-book models to provide the monographic materials they need in the most cost-effective manner. USF Libraries found EBA programs to be successful in terms of the amount of content accessed and administrative expenditures.[14] In a study conducted at Brigham Young University (BYU) measuring the effect of different e-book acquisition models on library expenditures, users were provided with unlimited access to titles using an EBA model. The BYU authors concluded that other libraries would also do well to evaluate newly emerging e-book acquisition models.[15]

Hacettepe University Libraries studied the effects of acquisition model choices on total costs, model choices relative to different disciplines, models which offered the most suitable total, and unit usage costs. E-book acquisition models were tested based on real usage data, and a subject and cost analysis was made using different acquisition scenarios. The authors concluded that EBA models were among the most suitable models available, and would, when selected, decrease expenditures.[16]

The EBA model studies cited above have generally applied to e-books. At the University of Colorado (CU) Libraries, EBA was used for streaming videos from Alexander Street.[17] EBA is recommended for libraries that have room in their budgets for perpetual access to streaming videos, for libraries that need patron input, or for institutions that have broad program offerings. But there are risks and limitations to consider as well. If there is more than one library participating in the system, or if the EBA model is applied by a consortium, making title selection based only on usage statistics will be risky. For example, one of the most surprising findings in the EBA program at the CU Libraries was that no single video was viewed by all three libraries. Especially at the consortial level, patron needs may be too diverse for streaming videos.

Orbis Cascade Alliance Consortium, which consists of thirty-nine academic libraries, evaluated Wiley's EBA collection. A consistent history of the use of Wiley titles by consortium members, stable costs, and the vast number of accessible titles were the decisive reasons for choosing the EBA model. In addition, the authors found that the libraries used the model efficiently, and that constant access to the most frequently used titles was ensured.[18]

An EBA model has proved unsuccessful in some library settings. Librarians at Case Western Reserve University conducted a study of Elsevier, CRC, and EBSCO EBA models for engineering disciplines, focused on efficient budget management and increased content access. After evaluations based on usage, the CRC EBA model was deemed unsuccessful, and canceled.[19]

This literature review reveals that academic libraries and consortia, in their search of e-book acquisition solutions, have had similar experiences using EBA models. Usage statistics, material type, unit price, and library budget considerations were the main factors used in reaching decisions regarding a model's overall feasibility and viability. While the EBA model met the criteria for being successful and useful by some librarians, some other librarians experienced difficulties, and discontinued use of the model. The amplitude of the accessed collection, the controlled use of the budget, the selection of resources with guaranteed use, and the control of title selections were considered advantageous. The disadvantages were that some collections offered are never used, publisher restrictions, and workload increases for librarians. The workload increases for librarians result from the necessity of providing access to titles added throughout the process, informing users, cost and usage evaluation, and decision making.

Methodology

Hacettepe University offers programs in medicine and health sciences, science and engineering, and social sciences and humanities at the graduate and undergraduate levels. Cambridge University Press EBA collections gave Hacettepe University programs the opportunity to access many valuable and relevant interdisciplinary resources for users. The distribution of the books in the Cambridge University Press EBA collections (n = 35,624), according to categories specified by Cambridge University Press, were *Books for Research* (52 percent), *Cambridge Library Collection* (19 percent), *Coursebooks* (27 percent), *Legacy Textbooks* (3 percent), and *Silverberg's Principles* (one book). Looking at the subject distribution of the e-books, 80 percent of them belonged to the *Social Sciences and Humanities* category,

14 percent belonged to the *Science and Engineering Category*, and 6 percent belonged to the *Medicine and Life Sciences* category. The Cambridge EBA model was implemented at Hacettepe University Libraries from December 16, 2019, to December 31, 2020, when EBA collections (*n* = 35,624) were opened for access by Hacettepe University users. Collections were accessible from the publisher platform without digital rights management (DRM) and with unlimited users. This model was implemented for the first time by the library. The library was not allowed to choose which collections they could include in the EBA Collection.

Our evaluation of the Cambridge EBA model was conducted to determine whether it would be a viable acquisition model for the creation of collections that could meet the needs of users efficiently and economically. The EBA Model implementation process was a new experience for the Hacettepe University Libraries, and was also a relatively new acquisition model in Turkey. We believe that our study of the experience of Hacettepe University Libraries in its efforts to introduce and administer the Cambridge EBA Model will be useful to other academic libraries in the development and customization of their own acquisition practices. Additionally, we believe that our study will also help publishers and providers understand the problems experienced by libraries in the development of acquisition strategies.

In this study, we posed the following questions:

1. Using the Cambridge EBA model, how much was the unit usage and average book cost for Hacettepe University Libraries?
2. How were the titles selected for purchase after the EBA period?
3. What was the distribution of the titles used in the Cambridge EBA model by subject and year?
4. Which administrator difficulties were faced during the implementation process?
5. Is the Cambridge EBA model suitable for Hacettepe University Libraries?

Within the scope of the license agreement, all e-books in the Cambridge University Press EBA collection were opened for access by Hacettepe University users, except for *Cambridge Companions*, *Cambridge Histories*, and textbooks. Additionally, Hacettepe University already had previously-purchased titles from Cambridge University Press in its collection. For this reason, aside from the previously-purchased titles, MARC records for the other e-books in the EBA model were requested from the publisher. MARC records of the titles added to the collection afterwards were sent by the publisher monthly, and added to the system. At the end of the license period, statistics were provided by the publisher's platform in exchange for the previously agreed-upon sum of 30,290 USD. In celebration of the tenth anniversary of the publisher's EBA model, the publisher announced a special offer of an additional 10 percent of the agreed-upon sum for selections, increasing the overall selection value to 33,319 USD. To reach a decision about title selections, a list that included information about titles such as ISBN, price, subject, publication date, and product group was provided by the publisher. After that a list of e-books to be purchased according to frequency of usage was created. Additionally, Hacettepe University considered user preferences and collection control. Given the fact that there were existing Cambridge titles in the collection provided by other vendors, the selection list was checked for books already existing in the collection, which were then replaced by the next highest frequently used book. The unit usage and average cost of the books selected were calculated, and subject and publication year analyses were made. The publisher provided list prices required to make such analyses.

Unit usage and average book cost were calculated according to the equations below:

Unit Usage Cost (UUC) = Total cost of the e-books purchased (C) / Total usage numbers for the e-books used within the time period (U)

Average Book Cost (ABC) = Total cost of the e-books purchased (C) / The number of the books purchased (P)

Findings and Discussion

The EBA model, which is one of the e-book acquisition models provided by Cambridge University Press, was opened for access at Hacettepe University Libraries between December 16, 2019, and December 31, 2020, for unlimited users. As previously mentioned, at the end of 2020, selected books were added to the collection according to the licensing agreement, which was pre-paid, according to list prices.

To prevent the overlapping of MARC records uploaded to the system, previously purchased books were removed from the list, and the remaining 35,624 e-books were uploaded to the system. Permanent selections were made based on this upload. The selection according to e-book usage was made based on total item request statistics, extracted from COUNTER R5 reports, which were provided from administrator accounts at the publishing platform. Total item requests combines all "requests" for, or interactions with, a title. In other words, both entire book downloads and individual chapter downloads are counted as item requests.[20]

The distribution of the books in the collection, according to categories specified by Cambridge University Press, is shown in Table 1 and Figure 1. More than half (52 percent) of the books were from the *Books for Research* category. *Coursebooks* (27 percent) came in second place, and the *Cambridge Library Collection* (19 percent) came in third. Looking at the number of unique books used, *Coursebooks* had the highest percentage (47 percent) of use, and *Books for Research* the second (41 percent) highest rate. The use rate of books from the *Cambridge Library Collection* and *Legacy Textbooks* was rather low. Looking at the distribution of the types of books purchased at the end of the model, *Coursebooks* had the highest percentage at 62 percent (n = 105), and *Books for Research* had the second highest percentage at 29 percent (n = 49). *Books for Research* and *Coursebooks* had the highest rankings among all the books opened for access. This caused an increase in the number of unique books and selected books, which were used from the same book type. Nevertheless, due to the high number of books opened for access, finding that the majority of the books used belonged to these types would not necessarily result in a complete evaluation on its own. It should not go without mention that overall e-resource usage and the use of *Research* and *Coursebooks* to support undergraduate education increased dramatically during the pandemic.

In general, looking at the ratio (7 percent) of the number of unique books to the total number of books (b/a), it can be seen that usage was quite low. Eighty-five percent of the *Legacy Textbook* type, 88 percent of the *Coursebook* type, 95 percent of the *Books for Research* type, and almost all (98 percent) of the *Cambridge Library Collection* type were hardly used. In other words, unfortunately, 93 percent (n = 33,162) of the books from Cambridge were never used at Hacettepe University Libraries.

Although the majority of the publisher's collection was open for access within the scope of the EBA model, the low number of used unique books (n = 2,462, or 7 percent), raises a few issues regarding the model and the collection presented. As Strothmann and Serrano also indicated, EBA agreements provide access to a certain collection without any flexibility, and thus libraries accept the risk of not meeting their expected usage beforehand.[21] In addition, not adding *Cambridge Companions*, *Cambridge Histories*, and textbooks to the scope of the EBA model implemented by the publisher could be considered as another influence on the low number of used unique titles.

Looking at the total usage frequency of the books in the collection, *Coursebooks* had the highest percentage by 53 percent (n = 19,599), and *Books for Research* are second at 35 percent (n = 12,865). Purchased books (n = 168) were used 10,688 times in that year. This constitutes 29 percent (n = 36,934) of the total usage. Only 7 percent of the books in the entire Cambridge EBA collection were used, and only 7 percent of those books were purchased because of high list prices. The number of purchased titles is so small relative to the collection size that the graphics bar representing it in figure 1 is not visible. Among Cambridge University Press e-books, *Coursebooks*, which support education and research activities, had the highest percentage both in terms of the used unique e-book quantity and usage frequency. See table 1 and figure 1.

In table 2, the distribution of e-books and their usage are shown based on the year of publication. More than half (54 percent) of books in the EBA model, and 39 percent of the used unique books were published in or before 2009. Twenty percent of the books in the collection and 31 percent of the used unique books were published in the past four years (2017–2020), and 35 percent of the total usage of the books belonged to this period. The highest rate for purchased books belonged to the year 2019 at 20 percent. Since the EBA model was first opened for use in 2020, the usage of books in that year was relatively lower. It was not possible to add books to the collection all at once. Adding MARC records to the system later, as new books were added to the collection, was one of the reasons for the late transmission of the books to users, resulting in the lower usage numbers.

It can be said that patrons used more recently published books in the Cambridge collection more often than books published in earlier years. The usage rate of books published 2017 to 2020, and the usage rate of books published before and during 2009, was approximately the same at 35 percent. Almost half of the purchased books consisted of recently published books. Overall usage was sorted from highest to lowest usage during selection, and the collection control of the books was made in the decision phase. By taking into consideration the books which were previously purchased from aggregators, the purchase of conflicting titles was prevented during collection control. In this way, recently published books with a high rate of usage were purchased, instead of older books which were already part of the collection.

Looking at the subject distribution of the e-books in the Cambridge EBA model, we observed that 80 percent (n = 28,344) of them belonged to the *Social Sciences and Humanities* category, 14 percent (n = 4,991) belonged to the *Science and Engineering* category, and 6 percent (n = 2,289) belonged to the *Medicine and Life Sciences* category (table 3). As might be expected, general usage in terms of the number of unique books used, *Social Sciences and Humanities* had the highest usage percentage 65 percent, while *Science and Engineering* books, and *Medicine and Life Sciences* books, were lower in terms of usage (17.5 percent) compared to the *Social Sciences and Humanities* category. However, looking at the ratio of the number of unique books used to the total number of books in the collection

Table 1. Distribution of E-books and E-book Usage According to Book Type

	E-Book Numbers								Usage			
	Total (a)		Used (b)		Selected (c)		b/a	c/b	Total		Selected	
Book Type	N	%	N	%	N	%	%	%	N	%	N	%
Books for Research	18,363	51.6	1,002	40.7	49	29.2	5.5	4.9	12,865	34.8	2,857	26.7
Cambridge Library Collection	6,688	18.8	145	5.9	7	4.2	2.2	4.8	1,789	4.8	410	3.8
Coursebooks	9,571	26.9	1,163	47.2	105	62.5	12.2	9.0	19,599	53.1	7,026	65.7
Legacy Textbooks	1,001	2.8	151	6.1	7	4.2	15.1	4.6	2,677	7.2	395	3.7
Silverberg's Principles	1	0	1	0.0	0	0.0	100.0	0.0	4	0.0	0	0.0
Total	**35,624**	**100.1**	**2,462**	**99.9**	**168**	**100.0**	**6.9**	**6.8**	**36,934**	**100.0**	**10,688**	**100.0**

Note: Some totals are not equal to 100.0%, due to rounding errors.

(b/a), we observed that the highest usage rate belonged to *Medicine and Life Sciences* (19 percent), and the lowest usage rate belonged to *Social Sciences and Humanities* (6 percent). Although the percentage of the *Books for Teachers* in *Social Sciences and Humanities* category was very low compared to the total number of books (n = 43, 0.1 percent), 30 percent of these books (n = 13) were used at least once. This was the highest ratio in the *Social Sciences and Humanities* category. The second highest usage rate belonged to *Psychology* books at 20 percent (n = 138). Thirty-three percent of the *Chemistry*-related books in the *Science and Engineering* category, and 27 percent of the *Medicine* books in the *Medicine and Life Sciences* category were used at least once (b/a). Books in some disciplines, where the ratio of the number of unique books used to the total number of books was relatively high (for example, *Chemistry*), were not added to the purchasing list. Total usage frequency of books and the existence of the previously purchased Cambridge books from other aggregators had a certain effect on the selection of books. It was known that previously purchased books had DRM restrictions. Users could access the same books without restrictions in the publisher's platform within the scope of the Cambridge EBA model, which increased the number of unique books used. Differences between aggregator and publisher platforms affected e-book usage.

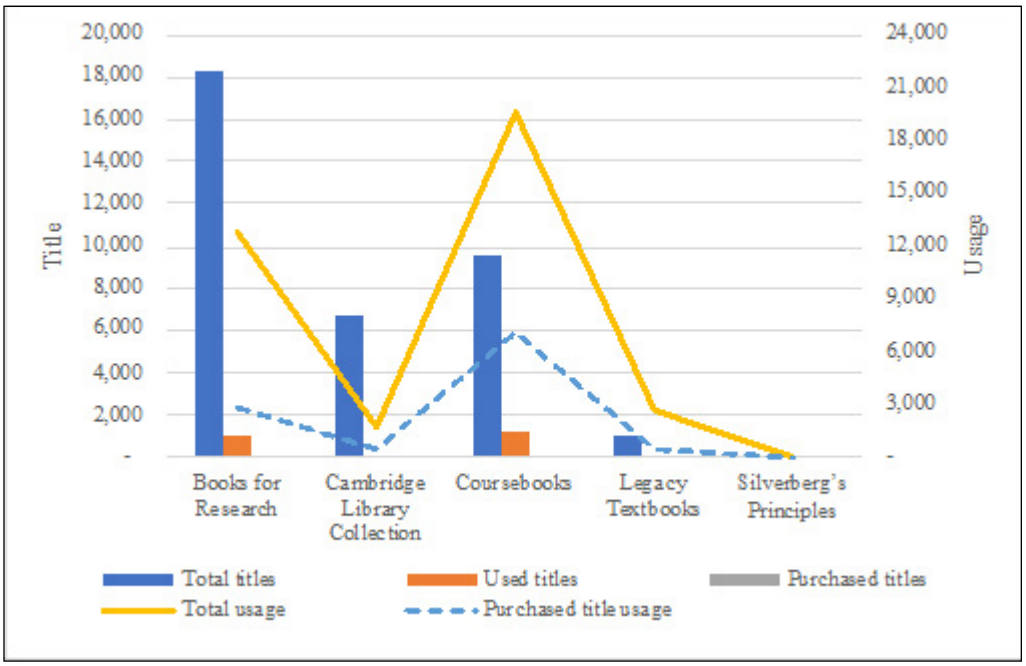

Figure 1. Distribution of E-books and E-book Usage According to Book Type

Fifty-seven percent of total usage (n = 20,887) belonged to *Social Sciences and Humanities*, 22 percent belonged to *Science and Engineering* (n = 8,148), and 21 percent (n = 7,899) belonged to *Medicine & Life Sciences*. *Life Sciences*, which composed 4 percent of the total collection, came in first place at 12 percent in terms of usage, and *Medicine*, which comprised 2 percent of the collection, came in second place at 10 percent.

Table 2. Distribution of E-books and E-book Usage According to Publication Year

	E-Book Numbers								Usage			
	Total (a)		Used (b)		Selected (c)		b/a	c/b	Total		Selected	
Pub. Year	N	%	N	%	N	%	%	%	N	%	N	%
2020	1,688	4.7	132	5.4	16	9.5	7.8	12.1	2,593	7.0	979	9.2
2019	1,779	5.0	227	9.2	33	19.6	12.8	14.5	4,396	11.9	2,398	22.4
2018	1,752	4.9	189	7.7	16	9.5	10.8	8.5	2,602	7.0	910	8.5
2017	2,057	5.8	212	8.6	15	8.9	10.3	7.1	3,207	8.7	1,209	11.3
2016	1,181	3.3	120	4.9	10	6.0	10.2	8.3	1,797	4.9	545	5.1
2015	1,492	4.2	149	6.1	13	7.7	10.0	8.7	2,037	5.5	696	6.5
2014	1,670	4.7	127	5.2	9	5.4	7.6	7.1	2,047	5.5	641	6.0
2013	1,729	4.9	137	5.6	9	5.4	7.9	6.6	2,247	6.1	594	5.6
2012	1,327	3.7	90	3.7	3	1.8	6.8	3.3	1,307	3.5	202	1.9
2011	555	1.6	23	0.9	0	0.0	4.1	0.0	281	0.8	0	0.0
2010	1,046	2.9	90	3.7	4	2.4	8.6	4.4	1,224	3.3	233	2.2
1899–2009	19,348	54.3	966	39.2	40	23.8	5.0	4.1	13,196	35.7	2,281	21.3
Total	**35,624**	**100.0**	**2,462**	**100.0**	**168**	**100.0**	**6.9**	**6.8**	**36,934**	**100.0**	**10,688**	**100.0**

Unit Cost

To make a more realistic cost calculation of the EBA model, the total usage of all e-books accessed during the year of implementation of the model, and the further usage of books purchased at the end of that year, should be considered together.

Unit usage cost and average book cost are calculated as follows:

$$UUC = C / U \rightarrow UUC = 30{,}290.00^{22} / 36{,}934 \rightarrow UUC = 0.82 \text{ USD}$$

$$ABC = C / P \rightarrow ABC = 30{,}290.00 / 168 \rightarrow ABC = 180 \text{ USD}$$

Unit usage cost using the EBA model was 0.82 USD, while on average the cost of one book was 180 USD. Since the books were purchased based on their list price, purchasing cost was high. As is also pointed out in the study by Kwok et. al, the EBA model can be an expensive solution for some libraries.[23] Additionally, the average book cost should not only be calculated using the cost of the individual book purchased; it should also be calculated considering the cost of all other unpurchased books used during the implementation year. In this way, the Cambridge EBA model was an economical model for Hacettepe University Libraries, and enabled the selection of e-books which are expected to be used in the future. The calculated unit cost will decrease with further usage of the purchased books.

Conclusions and Recommendations

While the unit usage cost of the Cambridge EBA plan at Hacettepe University Libraries was calculated at 0.82 USD, and the average book cost was calculated at 180 USD, only 7 percent of the books in the Cambridge collection (n = 2,462) were used and only 7 percent of those books (n = 168) were purchased. Purchased books made up 29 percent of total book usage. Analyzing the book types, it was observed that more than half of the collection (52 percent) consisted of *Books for Research*, 27 percent consisted of *Coursebooks*, and 19 percent consisted of *Cambridge Library Collection* books. Looking at the number of unique books used, we observed that *Coursebooks* came in first place with 47 percent, and *Books for Research* came second with 41 percent. The same ranking is also valid for total usage. Looking at the types of purchased books, it was observed that *Coursebooks* came first (62 percent), and *Books for Research* came second (29 percent). We also concluded that e-resource usage generally increased during the COVID-19 pandemic.

In general, it was observed that the number of unique books used from the Cambridge EBA model was quite low, while books of some types were hardly ever used. For instance, almost all (98 percent) books in the *Cambridge Library Collection* (composed of out-of-copyright and rare books, mainly from the eighteenth and nineteenth centuries) were never used at any time during the year. It is concluded that access to only certain book types (not including textbooks which would increase usage) affected total usage.

Table 3. Distribution of E-books and E-book Usage According to Subjects

	E-Books								Usage			
	Total (a)		Used (b)		Selected (c)		b/a	c/b	Total		Selected	
Subject	N	%	N	%	N	%	%	%	N	%	N	%
Social Sciences & Humanities												
Anthropology	424	1.2	29	1.2	3	1.8	6.8	10.3	410	1.1	150	1.4
Archaeology	531	1.5	27	1.1	2	1.2	5.1	7.4	337	0.9	98	0.9
Art	234	0.7	10	0.4	1	0.6	4.3	10.0	192	0.5	78	0.7
Books for Teachers	43	0.1	13	0.5	2	1.2	30.2	15.4	317	0.9	157	1.5
Classical Studies	1,467	4.1	65	2.6	4	2.4	4.4	6.2	745	2.0	226	2.1
Drama & Theatre	172	0.5	15	0.6	0	0.0	8.7	0.0	118	0.3	0	0.0
Economics	1,261	3.5	69	2.8	0	0.0	5.5	0.0	754	2.0	0	0.0
General (Humanities & Social)	568	1.6	52	2.1	3	1.8	9.2	5.8	833	2.3	256	2.4
Geography	369	1.0	5	0.2	0	0.0	1.4	0.0	41	0.1	0	0.0
History	7,574	21.3	240	9.7	11	6.5	3.2	4.6	2,666	7.2	738	6.9
Language & Linguistics	1,210	3.4	135	5.5	20	11.9	11.2	14.8	2,633	7.1	1,381	12.9
Law	2,264	6.4	202	8.2	15	8.9	8.9	7.4	2,624	7.1	885	8.3
Literature	460	11.4	257	10.4	13	7.7	6.3	5.1	2,807	7.6	802	7.5
Management	311	0.9	30	1.2	1	0.6	9.6	3.3	436	1.2	54	0.5
Music	760	2.1	10	0.4	1	0.6	1.3	10.0	136	0.4	48	0.4
Philosophy	1,530	4.3	86	3.5	2	1.2	5.6	2.3	873	2.4	100	0.9
Politics & Int. Relations	2,878	8.1	149	6.1	5	3.0	5.2	3.4	1,439	3.9	312	2.9
Psychology	696	2.0	138	5.6	21	12.5	19.8	15.2	2,871	7.8	1,494	14.0
Religion	1,332	3.7	29	1.2	1	0.6	2.2	3.4	230	0.6	40	0.4
Social Sci. Res. Methods	13	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0
Sociology	647	1.8	40	1.6	1	0.6	6.2	2.5	425	1.2	57	0.5
Sub-total	*28,344*	*79.6*	*1,601*	*65.0*	*106*	*63.1*	*5.6*	*6.6*	*20,887*	*56.6*	*6,876*	*64.3*
Science & Engineering												
Chemistry	60	0.2	20	0.8	0	0.0	33.3	0.0	354	1.0	0	0.0
Computer Sci.	366	1.0	64	2.6	7	4.2	17.5	10.9	1,618	4.4	454	4.2
Engineering	655	1.8	103	4.2	6	3.6	15.7	5.8	2,041	5.5	301	2.8
General Sci. (Science)	219	0.6	8	0.3	0	0.0	3.7	0.0	167	0.5	0	0.0
Mathematics	1,356	3.8	63	2.6	3	1.8	4.6	4.8	1,178	3.2	285	2.7
Physics & Astronomy	1,304	3.7	67	2.7	4	2.4	5.1	6.0	1,123	3.0	175	1.6
Statistics & Probability	195	0.5	30	1.2	4	2.4	15.4	13.3	639	1.7	194	1.8
Earth & Environ. Sci.	836	2.3	75	3.0	2	1.2	9.0	2.7	1,028	2.8	95	0.9
Sub-total	*4,991*	*14.0*	*430*	*17.5*	*26*	*15.5*	*8.6*	*6.0*	*8,148*	*22.1*	*1,504*	*14.1*
Medicine & Life Sciences												
Life Sciences	1,485	4.2	217	8.8	9	5.4	14.6	4.1	4,366	11.8	459	4.3
Medicine	804	2.3	214	8.7	27	16.1	26.6	12.6	3,533	9.6	1,849	17.3
Sub-total	*2,289*	*6.4*	*431*	*17.5*	*36*	*21.4*	*18.8*	*8.4*	*7,899*	*21.4*	*2,308*	*21.6*
Total	**35,624**	**100.0**	**2,462**	**100.0**	**168**	**100.0**	**6.9**	**6.8**	**36,934**	**100.0**	**10,688**	**100.0**

More than half (54 percent) of books in the EBA model, and 39 percent of the used unique books were published in or before 2009. Books published 2017 to 2020 consisted of 35 percent of total usage, and 48 percent of purchased books. A vast majority of the collection (80 percent) consisted of books from the *Social Sciences and Humanities* category. Consequently, this category of books had the highest number of unique books used at 65 percent. Again, although they were only 6 percent of the total collection, *Medicine and Life Sciences* books had a higher usage rate (b/a) than other books.

For these e-books to be available to our users, we loaded the MARC records into our system. It is not always possible for users to choose and scan publishing platforms directly from among many databases. This circumstance reduces the usage of collections, which in turn reduces the return on investment for libraries. For this reason, it is of utmost importance for MARC records to be fully uploaded to discovery services or library catalogues, and for users to be informed accordingly. After removing the MARC records of previously accessible books from an EBA collection, publishers should send the remaining MARC records to libraries correctly and in a timely manner. In the implementation process of the model at Hacettepe University Libraries, all the MARC records of the books were logged into the system at the beginning of the implementation period, and newly added titles were added monthly. To add new sources to an EBA model, to present them to users in a timely manner, and to ease access, workflows between different library departments should be examined closely.[24]

Publishers should also inform libraries about changes to the collection and illegal usage in a timely manner. Although Hacettepe Libraries did not experience any problems in this regard during the implementation of the EBA model, illegal or automated usage that is not stopped immediately will be counted in statistics as usage regardless, thus distorting usage data for libraries employing usage-based subscription models. Additionally, after making the selection, an overlap check should be carried out between the library's collection and selected titles from the EBA collection, to prevent duplicate purchases. The advantages of an EBA model can be maximized when librarians have significant input into title selection.

Publishers should share their accurate and up-to-date book lists, including prices, publication dates, and subject categories. This information is necessary for decision makers during the selection phase. Libraries should evaluate these lists using usage statistics taken from administrator accounts, and make cost and subject analyses. Since usage statistics do not include certain kinds of information, such as subject, book type, and cost, publishers should provide some support for creating a more comprehensive list, whenever possible.

Although an EBA model provides access to a wide collection, some book types may not be included in the collection. We consider this to be one of the reasons for a low usage rate of the total collection. Price difference may be among the reasons why some book types are not included in an EBA collection; but at the end of the license period, a purchase has already been made at list prices. We assume that price difference may not be the only factor in book type inclusion by the publisher. We also believe that keeping the collection large will not be a loss for publishers in terms of cost; on the contrary, it will contribute positively to a preference for an EBA model by libraries because of high usage. In succeeding years, low usage at a library may cause it to discontinue use of an EBA model, and also negatively influence that library's consideration of competing EBA models. For license agreements between consortia and publishers, collections which all member institutions of a consortium may benefit from will allow the use of an EBA model in a much more economical way.

Although it is possible to decrease costs with usage-guaranteed purchases, make better book selections, and manage library budgets more efficiently by using EBA models, it is probably not a good choice for libraries with a weak understanding of collection usage. During the decision phase the following factors should be carefully evaluated: the collection proposed by the EBA model, user profile, library budget, and usage data from the use of previous e-resource collections. It should not be forgotten that an EBA model carries the risk of purchasing books that will never be used.

The EBA model experience allowed Hacettepe University Libraries to make cost-benefit comparisons with books previously purchased by other means and acquisition models. The Library made choices based on the observation of usage data, which kept user needs in the foreground. Additionally, considering the ongoing and future use of previously purchased books, we believe that the EBA model will be an economically appropriate choice. Future acquisition agreements based on an EBA model should ensure that care will be taken to regularly maintain MARC records for new books, informing users of their upload to the system. Particular attention should be paid to the accuracy and completeness of the title information list used during the selection phase; we will request a combined title information and a usage data list from the publisher. During the process of title selection, we will conduct collection control, and will note books from other compilers to prevent duplicate purchases. Since books are purchased according to the list price at the end of the model period, it may appear as though the number of books is limited, and the average cost of the books is high. In the future, we plan to track the use of previously purchased books and re-evaluate expenses. We continue to evaluate EBA models from different

publishers at Hacettepe Libraries, and to prioritize user needs in making purchasing decisions, as was done with the Cambridge EBA.

Based on the results of our study, we conclude that the Cambridge EBA model was indeed the correct choice for Hacettepe University Libraries.

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Book Reviews

Elyssa M. Gould

Sudden Selector's Guide to Mathematics Resources. By John Meier, Annie Zeidman-Karpinski, and Nastasha Johnson. Chicago: Core, 2021. 87p. $15.00 e-book (ISBN 978-0-8389-3765-5).

The *Sudden Selector's Guide to Mathematics Resources* is the tenth and most recent addition to Core's Sudden Selector's Guide Series. This detail-oriented guide provides a "solid foundation for librarians engaged in collection development, outreach, and instruction," as the description promises. The thoroughness of this guide will be beneficial to new and veteran selectors alike. The five chapters provide an overview of the discipline of mathematics, the patrons of the library, the professional resources, popular books and publishers, and journals and other resources.

The first chapter, "Know the Discipline," introduces the history of mathematics and defines the different branches within the discipline. These disciplines are split into two categories: pure and applied. Pure mathematics is purely theoretical, while applied mathematics covers the branches that are applied to real-world problems. By understanding the differences between the different branches of mathematics, a new selector will be able to better serve the patrons. Since applied math is interdisciplinary in nature, the chapter does touch on the place of math at the university. This includes the importance to other departments, like STEM fields and education. The chapter discusses the importance of inclusive spaces for minorities by touching on the challenges that women face in mathematics.

Chapter 2, "Know the User," is focused on all patrons. Connecting with both students and faculty is important for liaisons. This chapter highlights how to assess needs of the mathematics department and how to improve communication with faculty and students in a manner that could guide a new employee on techniques that could greatly demonstrate the value of the library. This includes tips on attention to department newsletters and meeting with the mathematics department at formal meetings and informal gatherings in a way that could change the perception of how libraries and librarians are viewed. Suggestions for engaging students included public programs on math themes and classes that would benefit from information literacy instruction.

The importance of gaining expertise in selection is emphasized in chapter 3, "Know the Profession." It thoroughly lists societies, organizations, blogs, and websites for math selectors and mathematicians that librarians can refer to for advice, professional development, and collection development. Tips provided in this list could be of particular benefit to new librarians, such as listservs and mentorship opportunities, and mathematics organizations that provide information specifically for math librarians. An emerging field of research data management is described in a small section of this chapter. It is great that the authors encourage librarians to be proactive about providing data management. However, it is such a new field that more information and resources on this topic should have been included.

The last two chapters, "Books and Publishers" and "Journals and Other Resources," provide advice specific to collection development. The tips that the authors provide clearly come from many years of experience of working with mathematicians and reflect the preferences that mathematicians have for specific resources. In addition to providing useful lists of resources and publishers, the authors included a helpful case study on managing course reserves as well as a full section on course reserves in chapter 4. Course reserves are extremely important for students who cannot afford expensive textbooks. Options for open educational resources were also included in the section. Useful acquisitions advice in these two chapters consists of working with approval plans, patron-driven or demand-driven acquisition, open access journals, accessing preprints, and institutional memberships. Properly using these techniques can save libraries time and money.

The thoroughness of this guide makes it a valuable reference tool for both new and seasoned math selectors. The guide can be useful to train new librarians and can be referred to for advice throughout one's career.—*Rachel K. Fischer (rfischer@ccslib.org), Cooperative Computer Services, Arlington Heights, Illinois*

Open Source Library Systems: A Guide. By Robert Wilson and James Mitchell. Lanham, MD: Rowman & Littlefield, 2021. 155 p. $32.00 softcover (ISBN 978-1-5381-4139-7); $95.00 hardcover (ISBN 978-1-5381-4138-0); $30.00 e-book (ISBN 978-1-5381-4140-3).

Robert Wilson and James Mitchell have written *Open Source Library Systems: A Guide* with two purposes in mind: "to gather in one place information on a variety of open source software (OSS) used by libraries worldwide" and "to provide an updated treatment of library OSS that has been sorely needed" (137). This approachable guide accomplishes both purposes and is well suited for anyone seeking a practical understanding of the parameters of OSS, the relationships and differences between OSS and proprietary software, and the place of both in the current library ecosystem.

The guide begins with two chapters recounting the history of OSS in computer science and the development of OSS applications in libraries. The first chapter explains the important difference between OSS and free software: "Free—also referred to as 'libre'—software is not to be confused with free, as 'in gratis' or 'without cost'" (2). Software without cost is often referred to as freeware. The user may not have access to the source code in freeware, and there are no assurances that the application will do what the user needs. OSS comes with licenses that allow users to see the source code and copy, use, and develop this code to meet their needs. The source code is libre, but there are costs associated with access.

Taking a high-level view, the authors describe how library automation supplanted manual workflows on the back end, and the impact of a world increasingly dominated by born-digital and electronic content on public-facing systems. OSS solutions arose to meet the need to share and manage nonprint resources. Integrated library system (ILS) vendors began implementing OSS technologies in their products, but in a highly competitive environment many ILS vendors have either merged or been bought out.

The authors integrate the evolution of OSS license types into the historical narrative and provide descriptions of the most common licenses for OSS applications used by libraries and other cultural heritage institutions. The chart "Popular Open Source Applications and License Information" (5) serves as a handy reference when reading about specific OSS library solutions in later chapters. Both chapters are brief, clearly written, and provide foundational knowledge that informs discussions about the different types of library systems described in subsequent chapters.

Each chapter, from chapter 3 onward, discusses a type of open source library system and describes the most popular OSS used by libraries. Chapter titles include "Open Source ILS," "Open Source and Digital Repositories," "Open Source Discovery," "Open Source Resource Sharing," and "Open Source Electronic Resource Management." These chapters can be read in any order, as needed. Each chapter begins with the "History and Current State" of the library system type, followed by descriptions of the "Open Source Options."

Within every chapter, each OSS option includes a brief history and description of the application, as well as a testimonial from a community member organization. The guide authors include information about "Community and Service Providers" and address the "Future Outlook" for that OSS. The chapter formatting allows a reader to quickly determine which OSS library systems are included. The index also includes references to organizations, developers, and terms, as well as the OSS headings.

Throughout discussions about OSS applications, the authors address the risks as well as the benefits of adoption. The guide does not provide detailed information on system implementations, although the appendixes include an essay "Notes on Library Systems Implementations" (139) and a high-level "ILS Selection & Migration Example" (143). The appendixes address some of the challenges that might arise during selection and implementation processes.

When considering the adoption of any library system, whether OSS or proprietary, the authors state that an application should not be judged on itself: "an individual or organization must evaluate the ecosystem around an application" (20). For OSS solutions, libraries need to consider the user community and any service providers that support the application. Service providers can work with the community to respond to development needs and offer hosting and technical support. The OSS system might not have all the functionality needed immediately, but that functionality could be developed within the community.

For proprietary applications, the health of the company must be considered, as well as how well the vendor responds to development requests and support over time. A library can implement a proprietary system that works well until the vendor is bought out by a competitor, which might then have other solutions and a support system favoring other systems options.

With this guide, the authors have made an enormous and intimidating topic accessible to library practitioners and decision makers who must determine their library's current needs, as well as assess the risks and benefits of choosing open source software.—*Patricia K. Thurston (patricia.thurston@yale.edu), Yale University Library, New Haven, Connecticut*

Sudden Selector's Guide to Political Science Resources. By Emily Keller and Laura Wimberley. Chicago: Core, 2021. 55p, $15.00 e-book (ISBN 978-0-8389-3884-3).

Sudden Selector's Guide to Political Science Resources is written by Emily Keller and Laura Wimberley as part of the Core Sudden Selectors Series of Guides. This series of guides was created to assist those librarians who have subject-specific duties in collection development, but the guides are also helpful for those who have liaison duties or are new to either of these areas of librarianship.

With backgrounds in both political science and public policy, Keller and Wimberley have appropriate expertise to lend to the political science subject area. The book comprises seven chapters that go in depth into various areas. Each chapter is thorough and clearly laid out. At the end of each chapter, a bibliography is provided for further study.

The book begins with an in-depth bibliography of the key works that one needs to consult when learning about collection development, followed with review sources one can turn to when evaluating sources for one's collection, and lastly a listing of websites and discussion lists one should follow in learning about what collection development is all about (ix–xii).With this information presented at the beginning of the book, the reader gets a solid background of how collection development works.

The book then explains the major branches and types of political science in the section "What is Political Science," along with the various methods (1). Keller and Wimberley also have a chapter explaining some of the things that one could do when entering political science librarianship. This is helpful in understanding how an academic political science department works and informs the selection of the best materials to serve this diverse group of academics. The authors also remind the reader that new librarians need to be aware of their biases when purchasing materials. While some of the material may be controversial, it is important to include these works so that students and faculty can study them.

The last five chapters cover in detail areas such as the information cycle; specifics of primary sources and monographs; and journals and databases that are essential to have in a political science collection. The book ends with a discussion of political science librarianship and the professional community.

This work is essential for those librarians who are new to the profession and who do not have much experience being a liaison librarian or a collections librarian in the political science subject area. Although this work is mainly directed to academic librarians, it is also helpful to those who assist patrons in the public library or in special libraries. Keller and Wimberley have created an in-depth guide into understanding the political science subject area that is clear and concise as well as beneficial to new library professionals.—*Christina Tooulias-Santolin (christina.tooulias@utoronto.ca), University of Toronto*

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