Contribution to the sustainability of the library in terms of climate change using the example of the acquisition department of a medical library

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Abstract
The fight against climate change is one of today's most critical issues. With their vital community role, libraries are obliged to be leaders in this fight by enhancing their sustainability. In the first step, this study reviewed the literature to pinpoint sustainable practices for libraries, focusing on the role of the acquisition department. That became a reference point for an interview with the Medical University of Silesia's Library Acquisition Department, which, along with loan statistics and collection analysis, established the department's strategic initiatives for environmental sustainability. Furthermore, students and faculty were surveyed to determine their preferences and attitudes toward collection policy. Findings confirm the Acquisition Department's commitment to environmental sustainability, demonstrating a responsive and forward-thinking approach to collection development.

Key words: *sustainable development; library collection development; carbon footprint; libraries, medical; surveys and questionnaires.*

Introduction

Sustainability has become a commonly discussed topic in many areas of human activity since the release of the 2030 Agenda for Sustainable Development document. The topic of sustainability in its multidimensional aspects is particularly noticeable in research papers in the fields of scientific library and information science (1). Given the essential role libraries played in creating Agenda 2030 (2) and taking into account their influential role in communities, they are well-placed to lead efforts in this regard (1). One of the critical areas of Agenda 2030 is environmental protection (2).

The poster presented at the 19th EAHIL Conference results from an analysis of the activities of the Acquisition Department of the Library of the Medical University of Silesia (SUM) regarding achieving environmental protection goals of sustainable development.

With a view on this specific area, we conducted a thorough traverse of the decision-making process at each stage of department work, the environmental awareness of the Library personnel and users, and the university regulations and economic factors influencing collection procedures. Firstly, we focused on identifying actionable steps an academic library can take to implement sustainability, particularly regarding how the acquisition department contributes to the library's efforts in that area. Furthermore, we evaluated the department's environmentally friendly initiatives and identified areas with potential for further improvement. Additionally, we analysed the preferences and behaviours of the Library users concerning environmental issues and the Library's collection policy.

Methods

We were tasked with investigating the operations of the Acquisition Department of SUM Library, focusing on issues related to collection policy and department priorities. We aimed to comprehend the decision-making process and assess whether the collection policy aligns with the actual collection structure. To achieve this, we analysed statistical data on library material purchases and usage, and next, we interviewed the staff responsi-

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ble for acquiring books, journals, and databases. In the interview, we emphasised obtaining information about the reasoning behind purchasing and discarding library materials and the goals and challenges of collection specialists. All this data was compared with the literature on the subject, whose authors focus on sustainability measures that libraries can take (1-3). We focused especially on the moves that library collection management departments can make in this area. The methodology was complemented by a survey of university students and staff. It aimed to identify the Library users' preferences related to using various forms of library materials and their views on electronic publications, particularly concerning sustainability goals.

Results

The literature analysis shows that, although environmental sustainability activities that can be carried out by libraries are often reduced solely to the construction of a green building (1, 2), their role extends beyond this. According to Fedorowicz-Kruszewska (2), libraries can also contribute through their resources, services, and interaction with their surroundings.

The acquisition department within the library plays a crucial role in managing the library's collection, spanning the processes of acquisition, management, and eventual disposal. The decisions made in this area can greatly affect the environmental sustainability of the library as a whole. Some key considerations for creating environmentally sustainable collections include choosing "greener" suppliers, responsible waste management oriented on reusing and recycling and purchasing materials with a lower carbon footprint (1, 3). When it comes to the latter, the majority of researchers advocate for increasing electronic collections at the expense of reducing printed ones (1, 3). Nonetheless, there are differing viewpoints, with some arguing that printed materials are actually more environmentally friendly (1, 3). However, existing tools for assessing libraries regarding environmental aspects incorporate the presence of an electronic collection as a key indicator of ecological sustainability (2). The need to balance user preferences, available storage space, and the library's budget is a strict but crucial challenge. In light of these, we designed an interview protocol for library personnel and prepared a survey aimed at library patrons.

Following the interview with the SUM Library's Acquisition Department staff, we determined the path of library materials, from purchase to discard (*Fig. 1*).

A key focus was the criteria for item acquisition, the consideration of e-book purchases, and the process of removing books and journals from the library collection.

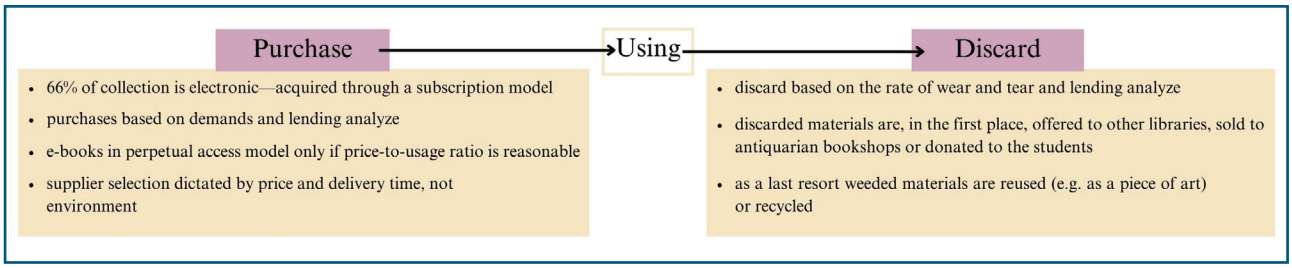

Fig. 1. *Work scheme based on interview with the Acquisition Department of the SUM Library employees.*

According to the interviews, purchases of books and journals are made mainly based on the requirements of students and university staff. Each decision to purchase more of the same title is preceded by assessing the loan statistics for the possessed copies. Preference is given to purchasing electronic books, but only if the price ratio relative to the expected use seems reasonable. Environmental factors play a minor role in supplier selection due to limitations in the Polish publishing market and the university's purchasing procedures prioritising price and lead time over ecological considerations.

The discard of materials is also determined by evaluating each item's usage. Due to the specialised nature of the SUM Library, it is essential to keep the collection current, and limited space necessitates regular weeding of the book collection. In the first instance, removed materials are offered to other Polish libraries, while the remaining items are sold to an antiquarian or provided

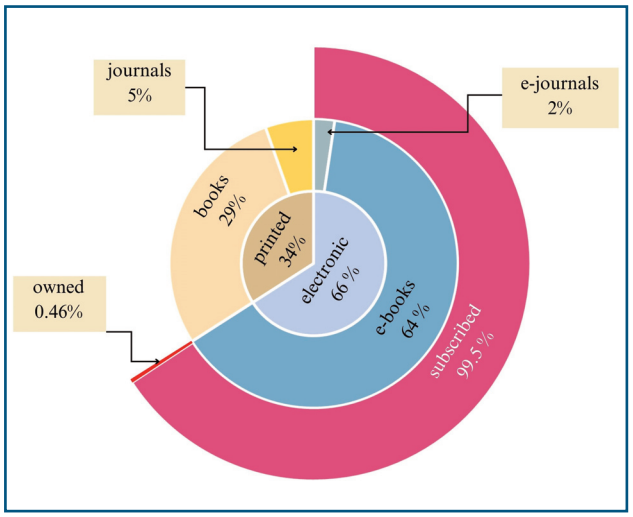

Fig. 2. *SUM Library collection: format, type, and e-resource purchase model (2023).*

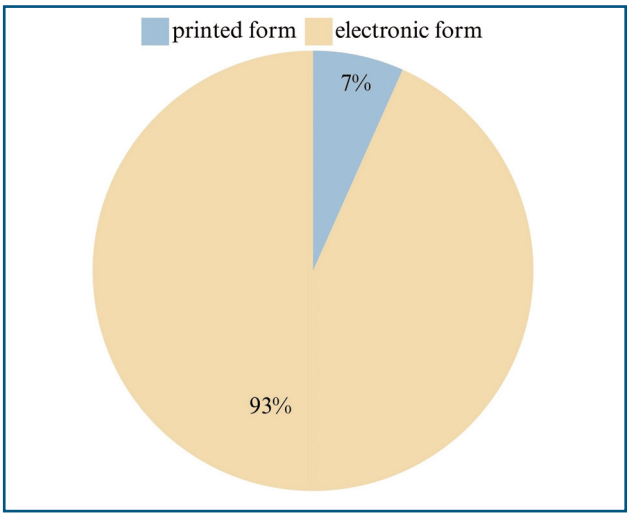

Fig. 3. *E-book vs print usage for top-rated book in SUM Library (2023).*

to students. In some cases, discarded materials are repurposed as art during cultural events or for other goals.

As the main guideline for the SUM Library's activities related to book collection management, the acquisition staff indicated purchasing and retaining only items essential to the library collection. Additionally, it's worth noting that the SUM Library has a high non-electronic collection usage rate compared to other public academic libraries in Poland, with 0.8 loans per book in 2022 (with an average of 0.1) (4).

The analysis of the materials in the SUM Library's collection aimed to demonstrate the proportion of electronic documents within the collection. The data reveals that electronic resources comprise 66% of the library's collection, with e-books accounting for 64% and e-journals for 2% of the electronic materials *(Fig. 2)*. The significant presence of e-books is attributed to the acquisition of database access with a large number of titles. Not all of them are of interest to the university's students and researchers. Nevertheless, a significant number of these items are purchased through a national consortium, and the subscription model of purchase, which facilitates access to shared resources among various subscribers rather than storing them on individual servers, seems to contribute to the library's more sustainable and environmentally friendly approach. Only 0.46% of the total number of e-books are acquired based on reader demand and are inventoried and owned by the library (Fig. 2). As part of the analysis of library statistics, we also examined the usage of both print and electronic versions of one of the books with the highest number of loans. We compared the number of physical loans of this title in printed form with the number of openings in the Ibuk database of Polish books. The ratio is 7% to 93% *(Fig. 3)*. Of course, to get an assessment, it would be necessary to consider that a single physical book may be used multiple times during the loan period. Nevertheless, this data offers insight into the potential of books in electronic formats. When a printed book is used – probably repeatedly, but still – by only one person, an e-book can be accessed by multiple readers.

The survey of SUM students and researchers was aimed at confronting the actions taken by the SUM Library's Acquisition Department with the preferences and opinions of the Library's users. The questions mainly revolved around the factors influencing the decision to use or not to use materials in a specific format, focusing on books, journals, and databases. 230 respondents participated in the survey. As for books, the number of people declaring exclusive use of either printed or electronic books is similar (24% and 18% respectively). The situation with journals is different, only 14 (6%) of respondents declared using only printed journals, while the rate of those using only e-journals reaches 43% *(Fig. 4)*. This result is conducive to analysing the legitimacy of purchasing print journals as

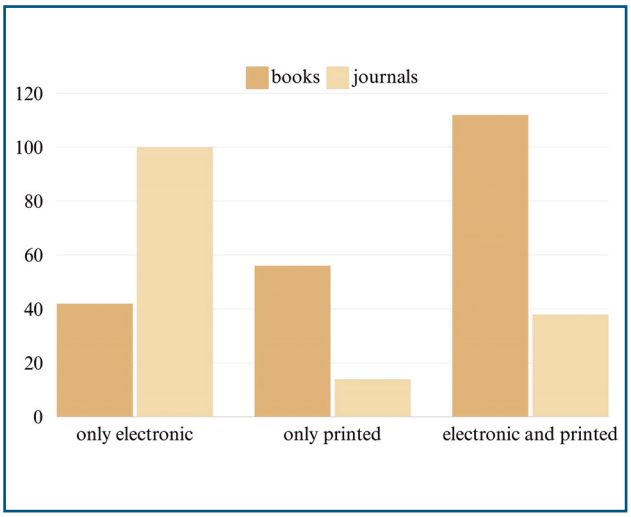

Fig. 4. *Preference of print and electronic books and journals in SUM Library as declared by patrons.*

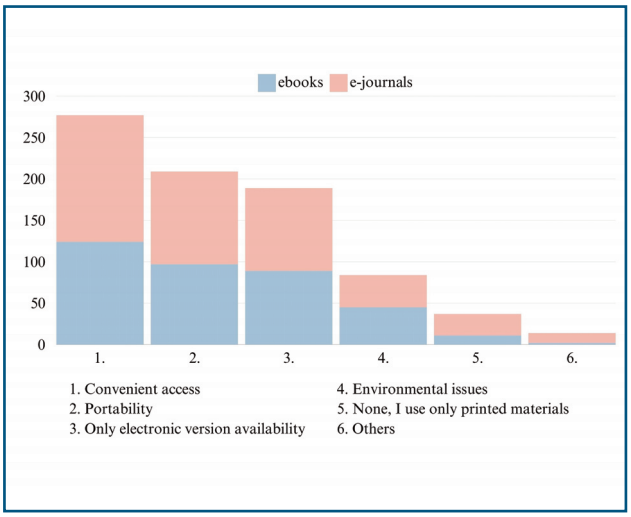

Fig.5. *Factors influencing the use of e-books and e-journals in the SUM Library: a comparative analysis.*

before while providing an opportunity to broaden the scope of sustainable development activities. The analysis also included examining the reasons for opting for the digital format of shared collections, which are driven by library users. Only 17% (for e-books) and 20% (for e-journals) of the respondents mentioned environmental considerations as a factor in choosing electronic library materials. The majority highlighted convenient access (67% and 54%), portability (49% and 42%), and the unavailability of a title in any form other than digital (43% and 39%) as their primary reasons for selecting e-books and e-journals *(Fig. 5)*. We also inquired about how readers utilise the library collection, with a particular focus on note-taking or copying. A surprising result was the number of individuals making copies or printouts of material excerpts. The numbers are similar for electronically accessed and printed, at 61 and 53 (27% and 23%), respectively *(Fig. 6)*. The high rate in case of electronic usage is concerning from an environmental perspective, as it counteracts the Library's sustainability efforts to some extent. It appears crucial to implement educational initiatives, including providing guidance to database and e-book users on the tools available for annotating, downloading, and highlighting relevant content. The final survey's question was designed to inform us whether patrons are willing to use electronic sources in order to reduce the carbon footprint generated by the SUM Library. 68% of them answered in the affirmative *(Fig. 7)*. Those who responded negatively were asked to justify their response. Reasons for adverse responses to that question include health concerns related to time spent in front of a screen, the perceived negligible environmental impact of printed materials compared to other industries, reservations regarding reliability and accessibility of electronic materials due to issues with internet connection and user interface opposed to ease of access of printed ones, as well as preferences for tactile learning experiences and personal and cultural attachment to printed books. These statements provided valuable insights into the preferences, opinions, and awareness of the Library users.

Conclusion

In light of the analysed literature, the Acquisition Department can contribute to environmental sustainability objectives by pursuing an environmentally friendly collection. When shaping the SUM Library collection, we consider various factors such as user preferences, financial implications, supplier policies, and environmental impact. However, the latter is not prioritised, primarily due to the limited number of medical literature vendors in Poland.

The analysis of the structure of library collections showed that it consists mainly of e-resources purchased in the subscription model, which allows shared resource access, promoting a sustainable and eco-friendly library approach. At the same time, 68% of library users

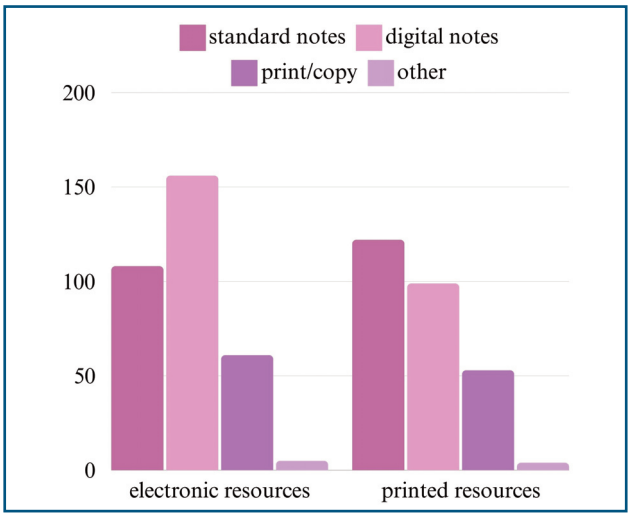

Fig. 6. *Taking notes: printed vs e-resources in SUM Library.*

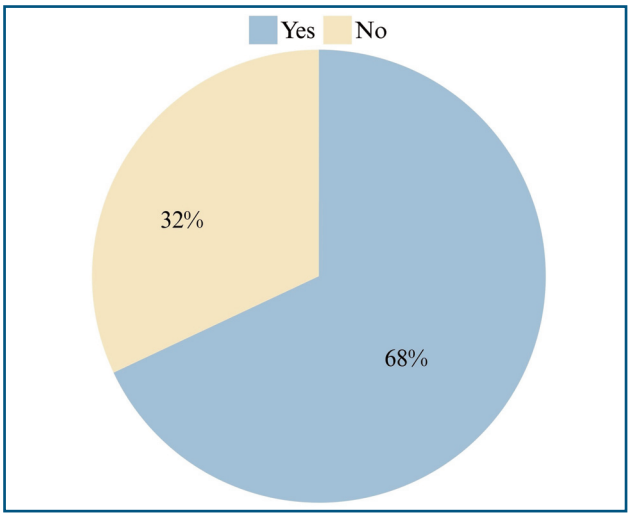

Fig. 7. *Would you use e-resources if it helped reduce the library's carbon footprint?*

use e-books and 60% use e-journals. While in the case of printed materials, the percentage of books used is similar (73%), the situation with journals is significantly different – only 23% of respondents admit to using them. Integral to developing an environmentally sustainable collection is the disposal of obsolete materials. When it comes to disposing of unnecessary books, we use responsible practices involving recycling and reuse. The survey among patrons showed us the importance of knowing and understanding their preferences for building environmentally sustainable collections. As a result of the survey, we decided to limit print journals purchases and conduct regular surveys to stay responsive to evolving needs. Furthermore, the findings showed the significant importance of education and technological solutions to reduce carbon footprint and paper consumption when using library material. All these findings seem to confirm the Acquisition Department's commitment to the SUM Library's environmental sustainability by reflecting a responsive and forward-thinking approach to collection development.

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