OA or Nonchalant: A Survey of Open Access Dissemination Initiatives of Higher Education Institution Library Websites and Systems in the Philippines

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The objective of this study is to determine the extent to which libraries are disseminating open access (OA) through conducting a survey of the different library websites and systems of higher education institution (HEI) libraries in the Philippines. This also aims to identify the types, subject fields, quantity, and quality of the OA resources shared by private and public HEI libraries in terms of the links they embed in their websites and systems. The study employed a quantitative research design focusing on website analysis. The findings revealed that many libraries have established websites and systems that they use to embed information about OA resources. Most OA resource links disseminated by HEI libraries are multidisciplinary, and the majority of these are OA journals. Comparing the number of OA resources advertised by HEI libraries, private institutions tend to share more links. From the 2,917 OA resources embedded in 312 library websites, the Directory of Open Access Journals (DOAJ) topped the most shared OA resource. Although librarians selected resources indexed in reputable databases, several resources were erroneous or flagged as predatory. Libraries need to improve their OA initiatives by increasing both the quality and quantity of the links they shared in their library management system (LMS) and content management systems (CMS). Librarians must also improve their knowledge about OA, predatory publishing, and indexing services to ensure the quality of OA resources being disseminated on their websites. The support of their institution of the resources needed by their library is also important for these initiatives to be implemented.

Introduction

In the digital age, the paradigm of information accessibility has been dramatically transformed, placing an increasing emphasis on the availability of open access (OA) resources (Guédon, 2017). OA refers to the practice of providing unrestricted access to scholarly research, educational materials, and other resources via the internet, free of charge or other access barriers (Tennant et al., 2016). This movement is a response to the limitations imposed by

traditional publishing models, which often restrict the dissemination of knowledge through paywalls and subscription fees (Frank et al., 2023; Siler, 2017).

OA resources are pivotal in democratizing knowledge (Acharjee & Acharjee, 2024). They ensure that students, researchers, and educators from around the world can access high-quality information regardless of their financial or institutional affiliations. This is particularly important in the context of higher education in the Philippines, where economic disparities and varying levels of institutional funding can impact the accessibility of academic resources. By advocating OA, libraries can bridge these gaps, thus supporting academic excellence and fostering a more inclusive academic environment (Maron et al., 2019).

The role of academic libraries in this landscape cannot be overstated. Libraries have traditionally been the gate openers of knowledge; in the digital era, this role extends to the curation and dissemination of OA resources (Boufarss & Haviainen, 2021). Librarians, as information professionals, are uniquely positioned to identify valuable OA resources, integrate them into library collections, and make them easily discoverable for their patrons (Buitrago Ciro & Bowker, 2020).

Moreover, the active marketing of OA resources by librarians is crucial. According to Hadad and Aharony (2024), librarians see great importance in their role of advising researchers regarding OA. The potential of OA benefits remains underutilized if users are unaware of their existence or unsure of how to access them despite the growing availability of OA materials. Librarians play a vital role in educating their communities about OA, guiding users in navigating these resources, and advocating for the adoption of policies within their institutions (Nagpal, 2021). Libraries implement various strategies to advertise OA to their patrons, such as adding OA resources to the online public access catalog (OPAC), sharing information about OA, and hosting workshops and lectures, all of which are crucial for maximizing the impact of OA initiatives (Adil et al., 2024; Balbin, 2025).

In the Philippines, higher education institution (HEI) libraries have made strides in embracing OA, but there is a need for a systematic evaluation of these efforts. In a country where higher education is heavily commercialized, opening access to knowledge is an unusual idea to many (Garcia et al., 2013). However, Pawlowski et al. (2014) argued that the potential of OA in the Philippines is high, given the economic barriers faced by HEIs. This study aims to fill that gap by assessing the OA initiatives of HEI libraries, focusing on the quantity and quality of OA resources they disseminate. By creating an inventory of OA links and evaluating the extent of their integration into OPACs and web pages, this research provides a comprehensive overview of how well these libraries are marketing OA resources to their patrons. The findings will inform the development of an OA institutional repository or directory, further enhancing the visibility and accessibility of OA resources in the Philippines. This research presents an overview of how HEI libraries in the Philippines are supporting OA. It also offers valuable insights for library administrators and policymakers to enhance the accessibility and visibility of OA resources, thus supporting academic research and education in the country.

Literature Review

The rise of OA and open educational resources (OER) has revolutionized academic publishing, creating a more inclusive and accessible knowledge landscape. This review explores recent

scholarly discussions on the advantages of OA and OER and the changing roles of librarians in advocating for them, despite the barriers impeding their widespread adoption.

One of the major benefits of using OERs is to expand access to learning and allow readers anywhere in the world to access these resources at any time (Salisbury et al., 2023). Because of the increasing cost in higher education and even with the high-cost resources needed for research, zero cost access to knowledge benefits students and researchers in the academic world (Swain & Pathak, 2024). Similarly, Nwaohiri (2021) emphasized that the promotion and awareness opportunities for OER can result to enhanced higher education success.

Unfortunately, several barriers were enumerated by Adil et al. (2024), such as lack of support, resources, skills, and infrastructure, which are still faced by librarians, educators, and other academics in disseminating OA resources. Academics also noted that lack of skills, awareness, and support are barriers or problems encountered in both publishing and using OERs (Kumar et al., 2021). Although some academic communities or fields have better awareness and usage of OERs, sustaining open access initiatives is still one of the biggest challenges. In addition, training programs and copyright awareness sessions are needed to further popularize the use of OERs (Midha & Kumar, 2022). Specifically, librarians and students need to be trained in identifying, accessing, evaluating, and using OA resources to increase their awareness and utilization of OA resources (Adil et al., 2024).

Librarians are not just to disseminate OA resources but must also educate users with OA resources. As part of their function as gate-openers, librarians use varied methods in educating users about OA resources and publishing (Boufarss & Harviainen, 2021). These includes user education initiatives intended for both users-as-readers and users-as-authors. Lusk et al. (2023), added that librarians must work closely with faculty in scholarly publication support roles by advocating OA. Even in expanding institutional repositories, it is important to foster librarian-faculty partnerships to make scholarships more open and accessible (Butterfield et al., 2022). Furthermore, making institutional repositories OA enhances the visibility of university research outputs in higher education (Korkuvi et al., 2022).

Libraries from developing countries tend to benefit from these OA opportunities. Due to the rise of free access to scientific literature, knowledge and research products can significantly increase even in resource-constrained environments (Buehling et al., 2022). Even without the use of expensive back-end software, academic libraries could provide information sources from different sources in a single-window search using free-source library management systems (Roy et al., 2022). Ogunbodede and Cocodia (2023) emphasized that the role of librarians in providing information to OA resources is one potential solution to lack of high-quality materials, high cost of commercial textbooks, and underfunding of general education. However, if the cost of publishing continuously increases and there is a lack of institutional OA mandates and policies, progress of OA acceptance among developing countries will remain slow (Sheikh & Richardson, 2023).

Another issue that slows down the acceptance of OA among faculty and librarians is the confusion around OA publishing and the growing concerns surrounding quality and reputation, as well as the perceived lack of peer review on OA journals. In a study conducted by Lusk et al. (2023), many faculty viewed OA publishing negatively due to the perception that OA journals are lower quality than subscription journals; worse is that there is a continued

belief that OA journals are fake or predatory. Scott et al. (2023) echoed these concerns as one reason why some faculty have negative perceptions regarding the quality of OA resources. These concerns are valid because there are OA journals that exist for the sole purpose of profit, not the dissemination of high quality research findings and furthering of knowledge (Berger & Cirasella, 2015). To foster greater OA participation, some libraries hire specialized scholarly communication librarians and offer workshops about predatory publishing to prevent patronage of and publication in predatory journals (Buitrago Ciro & Bowker, 2020). Librarians must also improve their own knowledge regarding predatory publishing to better help researchers acquire research literacy skills (Buitrago Ciro, 2022).

Although the benefits of OA are well established, recent literature extends beyond these general assertions to analyze the specific ways in which libraries advocate for OA and related open practices. Studies have identified a range of practical activities that librarians have implemented to advocate for OA (Jurchen, 2020; Nagpal and Radhakrishnan, 2021), open data (Oladokun & Gaitanou, 2024), open science (Saarti et al., 2020; Liu & Liu, 2023; Dorotić Malič et al., 2023; Zainal et al., 2023), and open publishing (Olubiyo & Fagbemi, 2021).

Besides the identifying library strategies, numerous studies have examined the awareness and usage of librarians, faculty, and students in the different OA resources. Research shows that faculty and students usually have positive views of OA resources, but faculty tend to know more about OA than students (Nazmul, 2020). However, some academic library users are still unaware of OA resources, such as those provided during the COVID-19 pandemic (Chisita et al., 2022). To address this, researchers recommended aggressive campaign among librarians to increase the use of OER to enhance teaching, learning, and research (Nwaohiri, 2021). As part of broader OA advocacy strategies, Hlasten (2023) emphasized that librarians must also advocate smaller publishers offering hybrid or gold OA in order to promote diverse sources of knowledge that benefit students and researchers.

As the academic community in the Philippines continues to embrace OA and OER, ongoing research and policy development will be crucial to address the emerging challenges and maximize the benefits of these transformative practices. Librarians continue to play a crucial role in these developments; they are well positioned to advocate for OA resources while providing researchers with more direct information on how to clearly distinguish credible OA resources from predatory publications (Buitrago Ciro & Bowker, 2020). In some libraries, librarians work with committees and liaise with researchers to discuss open science concerns, which may include selection of the relevant OA journal, identification of predatory journals, publication of papers in the institutional repositories, licenses and copyright issues, open review, open science from the researcher's perspective, and many more services (Dorotić Malič et al., 2023). These practices illustrate the proactive role of librarians in influencing their university policies with regards to OA. In terms of the active role of librarians, Buitrago Ciro and Bowker (2020) recommended that information about OA and predatory publishing should be made available to library users. This study aims to shed light on the dissemination initiatives of libraries in the context of their library websites to suggest recommendations on how academic libraries could further maximize the potential of OA resources in their institutions. Existing research has already explored awareness and attitude of librarians toward OA; however, no studies at present have conducted an inventory of the OA links shared by academic libraries on their websites and in their OPACs.

Research Objectives

This study aimed to explore the OA initiatives of HEI libraries in the Philippines by examining the links shared in their websites and systems. Specifically, the study aimed to accomplish the following:

1. Identify the types and subject fields of the OA resources disseminated by HEI libraries in their websites and systems.
2. Determine the extent of OA dissemination practiced by private and public HEI libraries in terms of the links they embed in their websites and systems.
3. Conduct an inventory of the OA links integrated into the libraries' OPAC or web pages.
4. Examine the OA resources linked by HEI libraries through cross-referencing with recognized indexing databases and published lists of potentially predatory journals.
5. Develop recommendations for the creation of an OA institutional repository or directory for academic libraries in the Philippines.

Methods

This study employed a quantitative research design focusing on website analysis. The researcher conducted a comprehensive review of the websites of HEI libraries in the Philippines to identify and catalog OA resources. It used an ad hoc list to record the types of resources, their accessibility, and the integration of OA links in their OPAC or web pages. To be included in the list, the resource must be marketed on the website under "open access resources," "open educational resources," or "free online resources." This method of using a checklist to collect and tally data from library websites has been utilized by various research to evaluate usability of OPAC or check availability of certain information (Kumar & Mir, 2017; Li & Wanigasooriya, 2016). Ullah (2024) also used the same method to determine necessary improvements on design, features, and number of items contained in selected library websites. Although libraries use social networking sites as platforms for marketing services, including OA resources, these do not have perpetual visibility as newer posts and contents superseded initially posted contents, and thus were not included in this study. The websites or the OPAC of the libraries offer a more permanent access to OA links. Although focusing on websites and OPACs may limit the assessment of the full range of libraries' promotional efforts, this could still provide insights toward the extent of effort that libraries exert in maximizing their websites or library portals as marketing or promotional tools for OA resources. The researcher initially identified universities from list of Recognized and Accredited HEIs (CHEd, 2024) per region and checked which institutions have working school websites or portals. Then, libraries were checked for an existing OPAC, LMS, or website. For the purposes of this study, LMS, OPACs, and CMS-based library websites were examined as the primary platforms through which HEI libraries disseminate OA resources. Since LMS availability and accessibility varied across HEI libraries, the study also considered CMS-based library websites as alternative or additional means to provide ongoing access to OA resources. Although these platforms differ in structure and function, presenting these allows readers to understand the digital environments in which the assessment was conducted and the range of strategies libraries use to make OA resources accessible to users.

Table 1 shows the breakdown of the HEI library websites visited. Initially, 404 HEIs were identified. After checking the availability and accessibility of their websites, only 77.22% had visible and retrievable websites. These libraries have different strategies on how their OA

TABLE 1
Summary of HEI Libraries Surveyed

	With Visible OPAC/Website	Without Visible OPAC/Website	Total
Private	185	65	250
Public	127	27	154
Total	312	92	404

resources links were presented depending on the set up of their library system and website. Some had embedded features in their library management system that enabled them to integrate OA links. Some libraries used other content management systems to provide lists of OA resources. Overall, a total of 312 OPAC's or library websites were visited; 59.29% of those are private HEIs and 40.71% are public, state-run or LUC institutions.

Out of the 312 libraries left for analysis, it was found that 93 libraries do not have a publicly accessible library management system (LMS). They have visible websites made with paid or open-source CMS, but link to their OPAC and LMS is locally hosted. As shown in Table 2, Follett Destiny Library Manager tops the list of LMS used in the Philippines, followed by Koha, which is an open-source LMS. A percentage of libraries also used in-house LMS, such as the iLib or Tuklas of the University of the Philippines System. Other LMS used by HEI libraries in the Philippines include TLC, Librarika, InfoLib, PageMaster, Athena, Online LMS, Atriuum, NewGenLib, and others. The "others" include Alexandria, Opals, WebPAC Pro, DynDNS, and many more.

Due to the absence of library management systems, some libraries set up library websites using various content management systems (CMS). Table 3 shows that the majority of the libraries' websites were managed and designed by their own university's ICT. Some are

TABLE 2
Frequency Distribution of LMS Used by HEI Libraries

	Frequency	Percentage
No LMS	93	29.81%
Follett	89	28.53%
Koha	55	17.63%
In-house	23	7.37%
TLC	12	3.85%
Librarika	10	3.20%
InfoLib	4	1.28%
PageMaster	4	1.28%
Athena	3	0.96%
Online LMS	3	0.96%
Atriuum	2	0.64%
NewGenLib	2	0.64%
Others	12	3.85%
Total	312	

TABLE 3
Frequency Distribution of CMS Used by HEI Libraries

	Frequency	Percentage
In-house	97	28.95%
Integrated	95	28.36%
WordPress	66	19.70%
Google Sites	51	15.22%
Wix	10	2.98%
Blogger	3	0.90%
Weebly	2	0.60%
Joomla	2	0.60%
Others	9	2.69%
Total	335	

integrated into the LMS that they use. Other libraries with no LMS or a developed in-house website to integrate their OA links, used WordPress, Google Sites, Wix, Blogger, Weebly, Joomla, and others as an alternative CMS. There are some libraries that used multiple strategies, such as maintaining an in-house website, integrating links in their LMS, and supplementing with WordPress or Google Sites.

The feature of Follett and Koha that enables libraries to integrate other links and modify homepages makes OA dissemination readily available for libraries using said LMS. Data shows that many libraries still do not have library management systems. Libraries with a working LMS have the capacity to incorporate OA links and other library information on their homepage. Results also show that many libraries are also maximizing free software applications even in their LMS, such as Koha, Librarika, PageMaster, NewGenLib, and others. Even the prevalence of WordPress, Google Sites, Wix, and Blogger, which all have "free-mium" packages, shows that libraries also maximize open-source CMS.

Results

Varied resource types were linked by HEI libraries in their websites. As shown in Table 4, most of the OA links embedded on library websites of academic libraries are OA journals. This is followed by resources, such as websites and online documents, and links to publishers offering OA contents. However, 10% of the resources linked by several libraries were found to be unavailable, erroneous, and inaccessible. There are also several journals that only offer OA articles but are not fully OA in nature; these were classified as semi-OA journals. Several journals are OA but have ceased publication. Fortunately, the websites of these discontinued journals still provide access to their archives. There are also libraries that provide links redirecting users to LibGuides created by other universities, which offer other lists of OA resources. This shows that the OA resources linked by HEI libraries range from journals, resources, databases, educational resources, repositories, libraries, directories, government and non-governmental documents to even library guides. The presence of erroneous links, LibGuides, and discontinued journals in the OA links of the HEI libraries indicates the need for update of the said links to make sure that only working and relevant information sources are shared.

TABLE 4
OA Resources by Type

	Frequency	Percentage
Journals	1,480	50.73%
Error	294	10.08%
Resource	241	8.26%
Publisher Initiative	128	4.39%
Database	118	4.05%
OER	110	3.77%
Libraries	98	3.36%
Directory	83	2.84%
Semi-OA Journals	76	2.61%
NGO	72	2.47%
Repositories	64	2.19%
Government	55	1.89%
Institutional Repositories	36	1.23%
LibGuides	32	1.10%
Journals (Discontinued)	30	1.03%
Total	**2,917**	

In terms of the topics covered by the OA links shared by HEI libraries, Table 5 shows that most of the OA links are multidisciplinary. Out of the 2,917 OA links, 13.88% are multidisciplinary. Specific topics with the most OA resources linked include accountancy, business and economics, humanities, and medical. Several subjects also have few OA resources which comprise less than 1% of the resources linked by libraries. These include religion, logic, sports, environmental science, marine sciences, veterinary, and geology and earth sciences. Overall, these topics reflect the multidisciplinary focus of the different HEIs in the Philippines, which their libraries try to support in terms of adding OA resources. The number of OA links per field also illustrates that other fields tend to have more OA content compared to other fields.

Table 6 shows that a private HEI in the Calabarzon region shared the greatest number of OA links on their website. Out of the total resources linked by all libraries, excluding the

TABLE 5
OA Resources by Field of Discipline

Field	Frequency	Percentage
Multidisciplinary	405	13.88%
Accountancy, Business and Economics	308	10.56%
Humanities	275	9.43%
Medicine, Nursing, Health	267	9.15%
Education	227	7.78%
Sciences	152	5.21%
Information Technology, Computer Sciences	126	4.32%

Field	Frequency	Percentage
Social Sciences	111	3.81%
Media, Music, Arts	109	3.74%
Management, Human Relations, and Organizations	105	3.60%
Governance and Public Administration	84	2.88%
Psychology and Guidance Counselling	73	2.50%
General Reference	71	2.43%
Food and Nutrition	70	2.40%
Mathematics, Statistics	63	2.16%
Engineering and Technology	57	1.95%
Criminal Justice and Military Science	56	1.92%
History, Geography	48	1.65%
Architecture, Designing, and Planning	44	1.51%
Tourism, Travel, Hotel and Restaurants	43	1.47%
Agricultural Sciences	42	1.44%
Library and Information Science	41	1.41%
Law	38	1.30%
Religion, Spirituality and Faith	29	1.00%
Logic, Ethics, Philosophy	20	0.69%
Sports and Wellness	15	0.51%
Environmental Sciences	13	0.45%
Aquaculture and Marine Sciences	12	0.41%
Veterinary and Animal Sciences	8	0.27%
Geology and Earth Sciences	5	0.17%
Total	**2,917**	

TABLE 6 Libraries with Most OA Integrated in Their Website (Noted by Region)					
Private HEI Library	Frequency	Percentage	Public HEI Library	Frequency	Percentage
Calabarzon-A	804	30.65%	NCR-P	228	8.69%
Calabarzon-G	322	12.28%	Ilocos-A	186	7.09%
NCR-H	190	7.24%	Central Visayas-A	112	4.27%
Caraga-E	156	5.95%	NCR-K	93	3.55%
Central Luzon-B	129	4.92%	NCR-O	81	3.09%
NCR-Ae	125	4.77%	Caraga-A	70	2.67%
Ilocos-F	117	4.46%	West Visayas-J	69	2.63%
NCR-Ad	111	4.23%	Calabarzon-I	67	2.55%
NCR-D	92	3.51%	Central Luzon-B	66	2.52%
Central Visayas-G	88	3.35%	West Visayas-K	60	2.29%
Average	23	0.89%	**Average**	21	0.80%

t-test p-value = 0.008

erroneous resources, 30.65% of these are shared by that library, followed by a library in the same region with 12.28%. For public HEI libraries, a library in National Capital Region (NCR) linked 8.69%, followed by a library in Ilocos region with 7.09% of the total listed OA resources. The 185 private HEI libraries shared an average of 23 links (0.89%) of the total OA resources. Public HEI libraries also averaged 21 links (0.80%) of the total open resources. Comparing the frequency of links shared by private and public HEI libraries, private libraries tend to share more OA links.

Based on the frequency distribution on the range of OA links shared by libraries, Table 7 shows that only 3.53% shared more than 101 OA links. Most of the libraries shared one to 25 OA links. It also revealed that 33.97% of the libraries with accessible and visible library websites contain no OA links at all. Overall, the libraries share an average of 22 (0.84%) of the total OA links.

TABLE 7 Frequency Distribution of OA Resources Disseminated by Libraries		
	Frequency	Percentage
More than 101 Open Access Links	11	3.53%
76 to 100 Open Access Links	5	1.60%
51 to 75 Open Access Links	20	6.41%
26 to 50 Open Access Links	42	13.46%
1 to 25 Open Access Links	128	41.03%
0 Open Access Links	106	33.97%
Total	312	

Because the majority of HEI libraries websites or OPACs shared one to 25 (an average of 22) OA links, the top 25 OA resources disseminated by libraries must also be revealed. Table 8 shows that the top shared OA resource is the DOAJ, followed by Philippine e-journals and Project Gutenberg. Although Philippine e-journals is a subscription platform, there are OA journals and articles retrievable from their website, which motivated 26.20% of the HEI libraries to share it as an OA resource. Other repositories and databases similar to Directory of Open Access Journals (DOAJ) (e.g., the Directory of Open Access Books [DOAB], Educational Resources Information Center [ERIC], Open Access Theses and Dissertations [OATD], Connecting Repositories [CORE], Social Science Research Network [SSRN] and Google Scholar) were also linked by many HEI libraries in their website. Local databases and libraries (e.g., Department of Science and Technology [DOST] STARBOOKS, PHL CHEd Connect, Philippine e-Lib) were also shared. Websites of publishers with OA initiatives (e.g., Springer, Wiley, Biomed, PubMed, JSTOR, ProQuest, OpenStax, PLOS, HighWire Press, and EBSCO) were also linked by libraries. Other OA initiatives (e.g., the Internet Archive, Open Textbook Library, and OER Commons) were also included in the commonly linked OA resources.

Besides the goal of providing quantitative description of the resources shared by academic libraries, this study also aims to qualify the resources. The following results compared the list of resources shared by different universities with known lists of predatory resources and compared it with different indexing and abstracting services. Table 9 shows that five (5) OA journals are included in the Beall's list of Predatory Journals and four (4) claims to be indexed

OA Resources	Frequency of HEI Libraries Linking the OA Resource	Percentage
TABLE 8 **Frequency Distribution of Links Disseminated by HEI Libraries**		
Directory of Open Access Journals (DOAJ)	112	35.78%
Philippine e-journals	82	26.20%
Project Gutenberg	80	25.56%
Directory of Open Access Books (DOAB)	76	24.28%
DOST STARBOOKS	70	22.36%
Springer Open	65	20.77%
PHL CHEd Connect	64	20.45%
ERIC	58	18.53%
Internet Archive	54	17.25%
Wiley Open Access	51	16.29%
BioMed Central	50	15.97%
J-STOR Open Access	47	15.02%
PubMed Central	45	14.38%
Social Science Research Network (SSRN)	42	13.42%
Google Scholar	39	12.46%
Open Textbook Library	39	12.46%
Philippine E-lib	38	12.14%
CORE	38	12.14%
ProQuest PQDT Open	38	12.14%
Open Access Theses and Dissertations	37	11.82%
OpenStax CNX	36	11.50%
Public Library of Science (PLOS)	35	11.18%
HighWire	34	10.86%
OER Commons	32	10.22%
EBSCO Open Dissertations	32	10.22%

by DOAJ which is less than 1 percent of the total journals shared by HEI libraries. This indicates a careful curation was done and very few have questionable quality.

On the other hand, it is also possible to compare the list with indexing services acknowledged by local accreditation and standards. Results also show that 31.90% of the journals are Scopus indexed; 10.28% are indexed in Emerging Sciences Citation Index (Clarivate-Web of Science), and only 1.26% of the journals are indexed in Andrew Gonzales Philippine Citation Index. Lastly, 29.26% of the journals are indexed in the DOAJ. Although most of the journals are not indexed or yet to be recognized by indexing services, the list indicates that HEI libraries carefully selected the resources they shared and attempted to exclude OA journals considered to be predatory and/or poor-quality.

In terms of the publishers, Table 10 shows that 13 to 14 publishers shared by libraries are also found in known lists of predatory publishers. The results revealed that HEI libraries included a significant number of potentially predatory publishers in their links. Although these

TABLE 9 Frequency of Flagged vs Recognized Open Access Journal Titles		
Journals	**Frequency (n = 1,586 OA, Semi-OA and Discontinued Journals)**	**Percentage of Journals**
Beall's List of Predatory Journals	5	0.32%
Claims to Be Indexed by DOAJ	4	0.25%
Scopus Indexed	506	31.90%
Clarivate Indexed	163	10.28%
AGPC Indexed	20	1.26%
DOAJ Indexed	464	29.26%

are 10 percent among the publishers that were linked in the libraries' websites, HEI libraries must reexamine their dissemination initiatives to improve the quality of promoted information resources in their websites. On the other hand, 15 of the journals are classified and recognized by Australian Political Studies Association, 12 of these publishers are recognized by DOAJ, and 20 of the publishers are shared by Wikipedia. Libraries could revisit these websites and enrich their lists to include more classified and recognized titles and publishers.

TABLE 10 Frequency of Flagged Publishers vs Recognized Publishers		
Publishers	**Frequency (n = 128 publishers)**	**Percentage of Publishers**
Predatory Publishers List	14	10.94%
Beall's List of Predatory Publishers	13	10.16%
APSA Classified Index	15	11.72%
DOAJ Open Access Publishers	12	9.38%
Wikipedia List	20	15.63%

Discussion

The results described the nature of OA resources shared by HEI libraries in terms of quantity and their partial quality in terms of the lists warning and recommending journals and publishers. The subject content of the resources also reflects the quantity of available information provided by OA publishing.

HEI Library Websites and Systems in the Philippines

The results revealed that many libraries have established websites and systems that they use to embed information about OA resources. Commonly used LMS are Follett, Koha, and in-house developed systems; common CMS used are also in-house developed, integrated in their LMS and WordPress. These websites and systems are required for HEI libraries to have; even the inclusion of OER is explicitly stated in the minimum requirements of Commission on Higher Education (CHEd) as suggested supplements for library collections (CHEd, 2021). However, the data shows that many HEI libraries still need to comply with the minimum requirements set by the commission as stated in Section 4 and 5 of the memoranda. Even with the budget constraints and lack of administrative support, available open-source CMS and

LMS are used by other libraries without the need for expensive subscription. In fact, some libraries invested in proprietary CMS to ensure delivery of information in a proper and easily understandable manner (Factor et al., 2023). Libraries with bigger budgets could develop separate tools embedded with recommender systems to help users select suitable OA journals (Entrup et al., 2024).

Types and Disciplines of Open Access Resources Disseminated by HEI Libraries

Most OA resources disseminated by HEI libraries are multidisciplinary, and most of these are OA journals. With the goal of many academic librarians to connect their patrons to vast resources, multidisciplinary OA repositories (e.g., DOAJ, DOAB, OATD) are the most efficient platforms to introduce OA resources in different fields of specialization at one time. Most academic libraries also cater to universities offering more than one academic program making it too expensive to subscribe to field-specific journals or databases. Multidisciplinary OA resources enable libraries to simultaneously cater to multiple students, faculty, and researchers regardless of their field at lower or no cost. Recent studies have shown that one-stop access is an effective solution for libraries in providing easy access to heterogeneous collections through a single location (Prajapati, 2016). These also offer simplified single interfaces for users (Roy et al., 2022), which also simplifies the backend design of the interface for librarians. In conclusion, multidisciplinary OA resources, such as DOAJ, DOAB, OATD, and many others, are convenient for both librarians and users.

A significant number of field-specific OA resources in business and economics, humanities, medicine, education, and natural science were also shared by different libraries. Although most libraries tend to share only those common multidisciplinary resources for convenience and efficiency, other libraries go above and beyond by disseminating field-specific OA resources to their patrons. The data mirrors the commonly offered academic programs in the Philippines, which are also in demand for Filipino students both in private and public HEIs. The 4th Philippine Graduate Tracer Study conducted by Tutor et al. (2021), revealed that social sciences, business and law, health and welfare, science and agriculture, and education are among the top chosen degree programs that HEIs offer. Consequently, OA links shared by HEI libraries would normally be aligned with the disciplines that their schools offer. This is also the reason why schools offering the same degree programs have similar OA links shared by their libraries. Other libraries could benchmark websites of libraries catering to similar degree programs to discover other OA resources they could share.

The OA links shared by libraries are also dependent on the number of OA resources available on the respective disciplines. The fields that topped the list also reflect the growth of OA in various fields. According to Severin et al. (2018), there are varying proportions of openly accessible research outputs across disciplines depending on how scholars from different disciplines embrace the concept of OA and on the relative importance of publication channels used by scholars. The category of multidisciplinary sciences has the highest gold OA percentage in Web of Science (Wang et al, 2018). Although the data of Piwowar et al. (2018) showed that biomedical sciences had the highest OA prevalence, a disclaimer was made to indicate that multidisciplinary journals were categorized under biomedical research. These recent statistics coincide with the findings that multidisciplinary resources are the most shared OA resource among libraries due to the growth of multidisciplinary OA publications.

OA Links Embedded by Private and Public HEI libraries

The findings also revealed that many OA resources are not well-disseminated on library websites. Private HEI libraries on average share 23 OA links, while public HEI libraries shared an average of 21 OA links. However, data shows that there are many libraries with websites or systems—which could be an opportunity to embed OA links—that did not provide any links at all. Despite their probable awareness of OA resources, many libraries were unable to share as many OA resources on their websites. This could be due to the lack of institutional support, resources, and even skills training needed to implement OA dissemination (Adil et al., 2024). Creating a repository, or even simply designing a website that contains links to OA resources, requires adequate ICT-related skills. Another problem is that most libraries rely on in-house websites managed by their ICT. Some LMS do not have features to embed links in their website. As a solution, librarians often maximize free CMS (e.g., WordPress and Google Sites) as a means of sharing OA resources. Factor et al. (2023) assessed websites of HEI libraries and found that their CMSs have been utilized to their fullest, enabling patrons to access information about collections and services with just one click. Other libraries also use social media to share OA resources, which was not included in this study. This study excluded social media, despite social media being an effective platform for information dissemination, because it has issues regarding permanent visibility of information, which makes it difficult to keep valuable content—such as OA resources—accessible over time.

Inventory of OA Links

The study was able to discover 2,917 OA resources from the 312 HEI library websites or systems visited. With an overall average of sharing one to 25 OA links per library website or system, the top 25 shared OA links presented an interesting trend to quantify the OA initiatives of libraries in the Philippines. The top shared OA repository, which is the DOAJ, was only embedded in 35.78% of the visited HEI library websites. The trend showed that more than half of the websites, and the LMS of these libraries, did not even include other common repositories (e.g., DOAB, OATD, Philippine E-journals, and Project Gutenberg). This study calls for HEI libraries to embed at least these OA resources to introduce free resources to their patrons to supplement their current print collection and electronic subscriptions. Studies also found that most are only familiar with OA journals in their field (e.g., DOAJ, OATD, and DOAB) (Sheikh, 2019; Sultan & Rafiq, 2021). Besides familiarity, DOAJ also topped the list of most-shared OA resources due to its strong reputation in the OA community (Entrup et al., 2024). Nevertheless, libraries must also advocate small publishers, along with the major publishers and databases offering hybrid and gold OA, to ensure diversity of knowledge resources accessed by and shared to users (Nazmul, 2020).

Cross-Referencing of OA Resources Linked by HEI Libraries with Indexing Databases and Predatory Journal Lists

The results show that librarians selected resources indexed in DOAJ, and Scopus; however, several resources are found on lists of predatory journals or publishers. In addition, 10.08% of the links embedded by libraries were erroneous, meaning that they were not actually OA, no longer running, untraceable, taken down, or that the original domain was already taken over by other websites. This suggests that, beyond embedding links to their websites, libraries

must also recheck or revisit the links from time to time to make sure that all links are working. There were also libraries that embedded hyperlinks to OA links that instead redirected users to the OA links shared by other university libraries. One way of making sure that these links are legitimate and working is to visit each link and to assess the quality and relevance of the contents for users. Checking against a list of known predatory journals or publishers would also help improve the list of OA resources to avoid sharing low quality information with the users. However, Kakamad et al. (2024) argues that watchlists also have shortcomings. Specifically, Beall's list is criticized for its lack of context and bias against OA publishers from less economically developed countries (Berger & Cirasella, 2015). Some watchlists also need refinement and regular updates to accurately reflect changes in publishing practices (Kakamad et al., 2024). Libraries must therefore continually revisit and recheck the links that they embed to make sure that no predatory resources are included. Buitrago Ciro (2022) emphasized that librarians must also update their knowledge and skills around predatory publications and indexing services to qualify as trainers of researchers and scholars. Debates regarding publishers are predatory or not require critical approach for researchers and librarians. Ojala et al. (2020) encouraged librarians to assess OA journals for their inherent value rather than their brand, and to evaluate their quality versus their prestige in promotion and tenure. As an alternative, Cabells list of predatory journals (Strielkowski, 2018), Academic Journal Predatory Checking (AJPC) system (Chen et al., 2023), and Kscien's list of predatory journals (Kakamad et al., 2019) could be referenced in determining the quality of journals and publishers. Soliciting opinions from experienced researchers or using established criteria is still advisable in assessing quality of journals and publishers (Misra et al., 2017). Apart from exclusionary approaches such as cross-referencing with blacklists, DOAJ is also providing datasets that contain snapshot of the journals indexed in their database as a historical record that libraries and researchers may consult (DOAJ, 2025).

Recommendations for the Creation of an OA Institutional Repository or Directory for Academic Libraries in the Philippines

Libraries must maximize other OA resources and make use of their websites and systems as a permanent display of their OA links. Despite the active dissemination of libraries in the use of OA resources, the actual integration of OA links in their websites still needs to improve. Maximizing the features of their LMS and utilizing available open-source CMS are some of the cost-efficient strategies that libraries could implement to disseminate OA. Librarians must explore other types and categories, beyond journals and multidisciplinary resources to advocate field-specific OA resources as well. Increasing the number of OA links would also be beneficial to offer more options to users. This includes sharing small publishers to keep the diversity of knowledge sources. Benchmarking from other HEI library websites with similar degree program offerings would enable librarians to explore other OA resources. Most importantly, libraries must make sure all links are working by continuously updating lists to prevent predatory content from being disseminated. Development of institutional repositories for OA resources in academic institutions is therefore recommended to provide easy access to OA links (Monirul & Shafkat, 2023; Eromosele et al., 2022). Academic and college librarians in the Philippines may start from examining the integrity of their existing repositories, databases, and links in their website using available tools such as watchlists or safelists (Teixeira Da Silva & Nazarovets, 2023).

Conclusion

This study concludes that HEI libraries disseminate varied OA resources. Although many libraries provided subject specific OA resources, multidisciplinary resources turned out to be the commonly shared OA resources. This includes the major databases—such as DOAJ, DOAB, and OATD. The survey also revealed that many OA resources are still under-disseminated by academic libraries in their websites and systems. Some libraries could be considered as appropriately "OA" or "overachiever" in terms of providing OA information while others remain "nonchalant" or "laid-back" by providing little to no information about OA resources.

Libraries that maximized their LMS and CMS to disseminate OA to their users implemented above and beyond strategies such as specifying OA resources per degree programs. Institutional support to the resources and training needed for libraries are therefore important to effectively advocate OA resources. This also includes librarians updating their knowledge about OA, predatory publishing, and indexing services to ensure the quality of OA resources being disseminated in their websites.

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