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INTEREST IN THE ISSUES OF ACADEMIC LIBRARIES IN POLAND IN THE YEARS 1980- 2023 IN THE LIGHT OF DATA FROM THE SCOPUS DATABASE

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ABSTRACT

Purpose: The authors of this article aim to offer a comprehensive overview of the interest exhibited by Polish researchers in academic libraries. By utilizing data from the Scopus database, the authors seek to identify the specific topics they explore and establish the global impact of their research output.

Methods: Analyses were conducted on publications by Polish researchers dealing with academic libraries between 1980 and 2023, identified through a search of the Scopus database. The bibliometric method and content analysis were employed in the research. A comprehensive analysis was conducted to examine the number of publications, their types, and linguistic profiles. The study also

looked into the journals where the articles were published, the national and international networks of cooperation between authors, correlations between citations and altmetric indicators, and specific topics covered in the publications.

Results/Conclusions: A total of 79 articles were analyzed. Increased interest in academic libraries among Polish researchers has been noted since 2017. The analyzed set of publications proved the dominance of papers produced in English (75%), the high share of journal articles (96%), and their dispersion in academic journals (41 journal titles were identified). Additionally, researchers demonstrated a proclivity towards publishing articles in journals not limited to LIS but encompassing other disciplines, reflecting a multidisciplinary orientation (70.3% of articles). The study's findings demonstrated limited cooperation among Polish researchers involved in academic libraries with foreign partners (7.5% of articles), indicating a preference for domestic collaboration. Nearly half of the papers (49.3%) were cited, and 44.2% were accompanied by altmetric indicators. Mendeley manager revealed a strong correlation between citations and references, whereas a weak correlation was observed between citations and mentions on Facebook. The conclusions drawn from the content analysis revealed a pronounced interest in library and information processes and services, with a specific research focus on electronic resources, services, and products. In contrast, research data management, the social capital of libraries, information literacy, and library architecture garnered moderate interest. No research interest was noted in library staff and library users' behavior.

Originality/Value: The authors established the limited visibility of Polish researchers' output in the Scopus database and the lack of publications by prominent Polish LIS representatives. This outcome can be attributed directly to the limited indexing of Polish scientific journals in the field of LIS within this database, indicating its negative evaluation as a reliable and comprehensive resource for monitoring the status and development trends of LIS.

KEYWORDS: library and information science, academic libraries, Scopus, bibliometric analysis, content analysis, visibility of scientific output, Poland

INTRODUCTION

Various methods may be employed in assessing scientific progress, such as examining the quality of the most reputable journals, the topics of conference presentations, the output of individual universities and countries, and the contribution of individual universities and countries to global scientific discourse. Analyses can include trends that emerge across or at the interface of multiple domains (e.g., Dalpe, 2002; Michel et al., 2011), individual disciplines (e.g., Liu, 2012; Hall, 2014), and the narrow issues that fall within their area of interest (e.g., Liu et al., 2012; Zibareva et al., 2014; Song & Zhao, 2013). Different categories of the material may be the subject of analysis: journal articles, books, theses and patents, conference presentations, and grey literature, whereas analysis criteria can take into account different aspects: geographical (e.g., Cano, 199; Lin, 2012; Zhuang et al., 2013), chronological (e.g. Aharony, 2012; Huffman et al., 2013; Sootheran, 2014), subject-personality (citations, author links, keywords, literature types, performance indicators) (Glowacka, 2008; Ellegaard, 2018; Jonkers & Derrick, 2012; Waltman et al., 2012; Antczak & Gruszka, 2022). Such research most often uses the resources of bibliographic databases, including national and subject bibliographies (Stefaniak, 1987; Pindlowa, 1988; Bajor, 2008; Nabiałczyk, 2014; Kamińska, 2019; Głowacka & Wozniak-Kasperek, 2023b) and international scientific databases such as Scopus or Web of Science (Liu et al., 2023; Ellegaard, 2018; Osinski, 2019).

In recent years, there has been a consistent rise in the number of publications presenting the results of bibliometric analyses based on data from the Scopus and Web of Science databases. This may be attributed to various factors, including the widespread utilization of big data tools and the growing demand for such analysis in research evaluation and scientific productivity by decision-makers

and research funding agencies (Ellegaard & Wallin, 2015; Hyland & Jiang, 2021). While some researchers argue that automatically extracted data should not be the sole object of analysis, as their low quality and lack of completeness lead to inconclusive results (Wallin, 2005; Mongeon & Paul-Hus, 2016; Hammarfelt & Rushforth, 2017), others represent the view that research conducted using the bibliometric method, despite some limitations, can contribute significantly to scientific progress, as it helps to document its evolutionary nature, identify research paradigms and the most popular topics, reveal existing research gaps and set research directions for the future (Garfield, 1979; Bornmann et al., 2014; Bhatt et al., 2020; Dora & Kumar, 2020). The authors of this text believe that bibliometrics is a valuable tool for examining the structure and process of scholarly communication. By identifying key authors, dominant themes, and influential voices, bibliometrics provides an overview of the discipline (Borgman & Furner, 2002; Ellegaard & Wallin, 2015). With this in mind, the authors decided to investigate the level of interest in academic library issues among the Polish LIS representative community.

LITERATURE REVIEW

The output of LIS representatives has already been subject to bibliometric analyses. Various perspectives were taken into account, including researcher ranking, content analysis, journal-specific impact analyses, and the output of single countries and regions (Kajberg, 1996; Uzun, 2002; Khoo, 2011; Milojevič et al., 2011; Lin, 2012; Ellegaard & Wallin, 2015). Dora and Kumar analyzed LIS publications by Indian authors from 1944 to 2017, revealing bibliometrics, library technology, library collections, and academic libraries as popular research topics (Dora & Kumar, 2020). Similar findings were made by Onyancha, who showed that between 2001 and 2005, academic libraries were the fourth most popular topic, trailing behind “bibliometrics,” “knowledge management,” and “social media” (Onyancha, 2018). Also, Hodonu-Wusu and Lazarus (2018) demonstrated through their analysis of LIS publications from 1998

to 2017 that academic library topics, including information literacy, bibliometrics, citation analysis, and open access, will continue to be prominent research trends in the future (Hodonu-Wusu & Lazarus, 2018). Furthermore, these researchers observed that the most commonly referenced articles in the LIS literature originated from the United States, England, and China. In Africa, South Africa and Nigeria stood out as the top contributors (ranking within the top 25 countries for LIS research productivity). Antczak et al. observed similar trends in analyzing the LIS publication output on academic libraries from 2012–2023, comprising 7,870 publications. The results indicate that the contribution of US researchers accounted for approximately 90% of all publications originating from the continent. In contrast, Asia's leading countries in terms of publication count were India (27% of articles) and China (18%). The UK stood out among European countries as having the highest publication activity (20%, accounting for 3% of all publications). Spain was second (15%, also corresponding to 3% of the entire collection). In Africa, the highest number of papers was recorded for authors from Nigeria (54%; 7% in relation to the entire collection) and South Africa (20%; 2% in relation to the entire collection) Antczak et al., 2023).

The existing literature review indicates that, thus far, no bibliometric analysis has been conducted on the research output of Polish scholars engaged in academic library research. Nevertheless, scholarly interest in this subject has been shown in publications demonstrating a general intensification of research into the history of libraries and librarianship (Birkenmajer, 1975; Migon, 1984; Bajor, 2008; Glowacka, 2008; Puchalski, 2016), works discussing the research areas of employees in individual LIS institutes and departments (Kowalska & Ciszewska, 2009; Przybysz-Stawska & Walczak-Niewiadomska, 2016) or texts in which the authors analyzed the share of Polish documents in LIS domain repositories and Scopus and Web of Science databases (Kowalska, 2012; Drabek, 2013; Antczak et al., 2023). The lack of in-depth bibliometric analyses relating to the exploration of the issue of academic libraries by Polish researchers was the premise for the creation of this article.

METHODOLOGY

At the search stage, the objective was to find works by Polish researchers (affiliated with Polish academic institutions) exploring academic libraries. The Scopus database was employed to acquire the data. The choice of this database was justified for several reasons:

1. Scopus indexes most international and reputable scientific journals in the LIS field.
2. The database is regularly updated.
3. It offers various data for advanced bibliometric analysis, such as citations, altmetrics, subject areas, and scientific trends.
4. Scopus is widely recognized and accepted in the scientific community as an essential tool for conducting bibliometric research.
5. In Poland, it is an evaluation tool for individual scientific output in academic promotion.

The following search instructions were used to retrieve the bibliographic material:

TITLE-ABS-KEY (“UNIVERSITY LIBRARY” OR “ACADEMIC LIBRARY” OR “COLLEGE LIBRARY” OR “UNIVERSITY LIBRARIES” OR “ACADEMIC LIBRARIES” OR “COLLEGE LIBRARIES”) AND AFFILCOUNTRY (POLAND)) AND PUBYEAR > 1979 AND PUBYEAR < 2024

Accordingly, a corpus of publications between 1980 and 2023 was obtained in late January 2024 and subjected to bibliometric and content analysis. The VOSviewer version 1.6.20 software (www.vosviewer.com), developed by Nees Jan van Eck and Ludo Waltman of Leiden University, was used to determine co-authorship of publications and keyword mapping. It is based on the VOS (*visualization of similarities*) technique developed by the same authors. This technique is used to visualize similarities between objects, in which similar objects are located close to each other and less similar objects are located farther apart (Van Eck & Waltman, 2007). The main objective of this study was to establish Polish researchers' level of interest in academic libraries by analyzing data from

the Scopus database. Furthermore, the research aimed to determine the specific research topics they undertook and estimate the visibility of their work in the global academic community. The analysis was limited to publications in the humanities and social sciences since most countries classify library and information science under these areas.

RESEARCH QUESTIONS

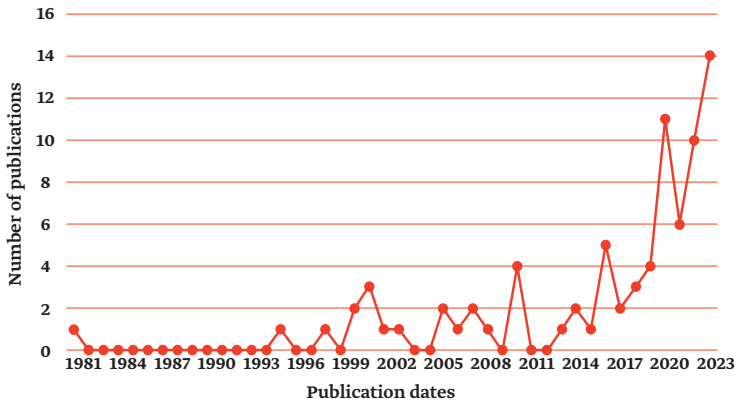
The following research questions were formulated:

- Q1: In which journals did the authors publish?
- Q2: What are the most prolific authors?
- Q3: What interest (citations, altmetrics) have the published texts received in the scientific circuit?
- Q4: What specific issues did the researchers address?

Results

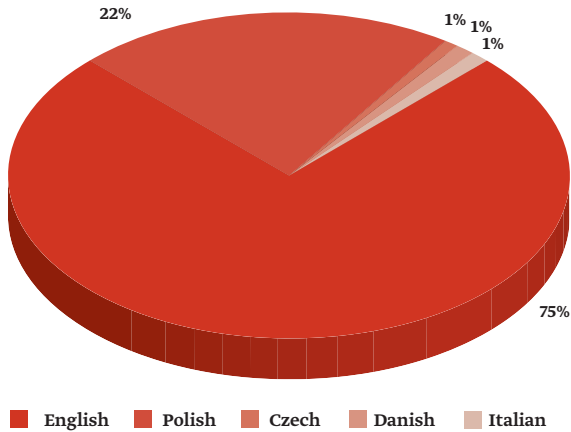
A search conducted in the Scopus database generated 113 publications by Polish researchers. The further analysis was limited to publications in the humanities and social sciences since most countries classify library and information science under these areas. Consequently, 87 works were obtained. Due to a lack of relevance, eight works were excluded from further analysis.¹ Ultimately, 79 texts were included in the analyses. Most of these were published in 2023 (14), 2022 (10), and 2020 (11). While the period between 2013 and 2016 was characterized by a moderate increase in the number of articles (between one and five texts per year), no publication was recorded in the Scopus database between 1981 and 1993. An analogous situation occurred in the years 1995–1996, 1998, 2003–2004, 2009, 2011–2012. Polish researchers have shown a growing interest in the subject of academic libraries since 2017 (cf. graph 1).

1 Although not directly related to academic libraries thematically, these resources demonstrate the utilisation of academic library resources for the conducted literature review. They were either published by academic libraries or featured illustrations from the collections of academic libraries.



GRAPH 1. Number of publications on academic libraries by Polish researchers between 1980 and 2023 disclosed in the Scopus database, including publication dates.
Source: Own elaboration.

In terms of language, articles published in English dominated the material analyzed (59). This was followed by publications in Polish (17), Czech, Danish, and Italian - one document each.



GRAPH 2. Publications on academic libraries by Polish researchers issued between 1980 and 2023 disclosed in the Scopus database by language criterion.
Source: Own elaboration.

In terms of form, the collection was dominated by journal articles, totaling 74. Smaller subcategories comprised post-conference speeches (3) and chapters from books (2). Articles on academic libraries appeared in 41 journals (cf. Table 1).

TABLE 1. TITLES OF JOURNALS FOUND IN THE SCOPUS DATABASE CONTAINING ACADEMIC LIBRARY ARTICLES BY POLISH RESEARCHERS PUBLISHED BETWEEN 1980 AND 2023

No.	Journal title	Number of articles	Scopus Subject area	2022 Quartile	Cite Score 2022	SNIP 2022	SJR 2022	Score from the Ministry of Science and Higher Education ²
1	<i>Journal of Academic Librarianship</i>	10	Social Sciences: Library and Information Sciences; Social Sciences: Education	Q1 Library and Information Sciences; Q2 Education	4.1	1.694	0.899	200
2	<i>Library Management</i>	6	Social Sciences: Library and Information Sciences;	Q2 Library and Information Sciences;	2.3	0.737	0.439	70
3	<i>Liber Quarterly</i>	5	Social Sciences: Library and Information Sciences;	Q2 Library and Information Sciences;	3.0	0.992	0.401	70
4	<i>Przeгляд Zachodniopomorski</i>	5	Art and Humanities: Museology; Art and Humanities: Historia Art and Humanities: Archeology; Social Sciences: Archeology;	Q4 Museology; Q4 History; Q4 Archeology	0.1	0.003	-	70
5	<i>Electronic Library</i>	4	Social Sciences: Library and Information Sciences; Computer Science: Computer Science Application	Q1 Library and Information Sciences; Q2 Computer Science Application	3.9	0.998	0.488	70
6	<i>Libri</i>	3	Social Sciences: Library and Information Sciences;	Q2 Library and Information Sciences;	1.4	0.775	0.298	100
7	<i>Folia Toruniensia</i>	2	-	-	-	-	-	20
8	<i>Library Hi Tech</i>	2	Social Sciences: Library and Information Sciences; Computer Science: Information Systems	Q1 Library and Information Sciences; Q2 Information Systems	4.9	1.217	0.507	70

2 In Poland, the Ministry of Science and Higher Education has been compiling lists of scored journals since 2003. They serve as a benchmark for evaluating the achievements of individual researchers and entire universities, based on the 'prestige' of the publications. These lists have been modified several times. Initially, the scoring of journals was based on the number of citations, impact factor and indexation in recognised journal databases, as assessed by the Science Evaluation Commission. A list was in place in the first half of 2024, assigning each journal a score of 20, 40, 70, 100, 140 or 200 respectively (Musiał-Karg, 2023).

No.	Journal title	Number of articles	Scopus Subject area	2022 Quartile	Cite Score 2022	SNIP 2022	SJR 2022	Score from the Ministry of Science and Higher Education*
9	<i>New Review of Information Networking</i>	2	Social Sciences: Education Computer Science: Information Systems Computer Science: Computer Networks and Communication Computer Science: Human-Computer Interaction	Q2 Education Q3 Information Systems Q4 Library and Information Sciences; Q4 Human-Computer Interaction	2.0	0.828	0.243	20
10	<i>Pamiętnik Literacki [Literary Diary]</i>	2	Art and Humanities: Literature and Literary Theory	-	-	0.104	-	100
11	<i>Slavic and East European Information Resources</i>	2	Social Sciences: Linguistics and Language; Social Sciences: Library and Information Sciences;	Q4 Linguistic and Language; Q4 Library and Information Sciences;	0.1	-	0.101	40
12	<i>Z badań nad Książką i Księgozbiornymi Historycznymi [From research on historical books and book collections]</i>	2	Arts and Humanities: History; Arts and Humanities: Social Sciences: Library and Information Sciences; Social Sciences: Communication	Q4 History; Q4 Arts and Humanities (miscellaneous); Q4 Library and Information Sciences; Q4 Communication	0.1	-	0.101	40
13	<i>Argument: Biannual Philosophical Journal</i>	1	Arts and Humanities: Religious Studies; Arts and Humanities: Philosophy	Q4 Religious Studies; Q4 Philosophy	0.1	0.052	0.100	70
14	<i>Cataloging And Classification Quarterly</i>	1	Social Sciences: Library and Information Sciences;	Q3 Library and Information Sciences;	0.7	1.583	0.199	70
15	<i>College and Research Libraries</i>	1	Social Sciences: Library and Information Sciences;	Q1 Library and Information Sciences;	3.3	1.876	1.002	140
16	<i>Global Knowledge Memory And Communication</i>	1	Social Sciences: Library and Information Sciences;	Q2 Library and Information Sciences;	2.9	0.894	0.354	20
17	<i>Grey Journal</i>	1	Social Sciences: Library and Information Sciences;	Q2 Library and Information Sciences;	1.7	0.476	0.211	20

No.	Journal title	Number of articles	Scopus Subject area	2022 Quartile	Cite Score 2022	SNIP 2022	SJR 2022	Score from the Ministry of Science and Higher Education ²
18	<i>Health Information and Libraries Journal</i>	1	Social Sciences: Library and Information Sciences; Health Professions: Health Information Management; Medicine: Health Informatics	Q1 Library and Information Sciences; Q1 Health Information Management; Q1 Health Informatics	6.5	1.655	0.909	70
19	<i>Hudebni Veda</i>	1	Arts and Humanities: Music	Q2 Music	0.4	0.140	0.123	70
20	<i>Information Technology and Libraries</i>	1	Social Sciences: Library and Information Sciences; Computer Science: Information Systems	Q2 Library and Information Sciences; Q3 Information Systems	2.2	1.410	0.607	100
21	<i>International Information and Library Review</i>	1	Social Sciences: Library and Information Sciences;	Q2 Library and Information Sciences;	2.3	0.617	0.401	20
22	<i>Journal of Librarianship and Information Science</i>	1	Social Sciences: Library and Information Sciences;	Q1 Library and Information Sciences;	5.1	1.615	0.564	100
23	<i>Latin American Research Review</i>	1	Arts and Humanities: Literature and Literary Theory; Arts and Humanities: General Arts and Humanities; Arts and Humanities: History; Social Sciences: Cultural Studies; Social Sciences: Anthropology; Social Sciences: Political Science and International Relations; Multidisciplinary; Social Sciences: Sociology and Political Science; Economics, Econometrics and Finance; Finance: General Economics, Econometrics and Finance; Social Sciences: Geography, Planning and Development; Social Sciences: Development	Q1 Literature and Literary Theory; Q1 General Arts and Humanities; Q1 History; Q1 Cultural Studies; Q2 Anthropology; Q2 Political Science and International Relations; Q2 Multidisciplinary; Q2 Sociology and Political Science; Q2 General Economics, Econometrics and Finance; Q3 Geography, Planning and Development; Q3 Development	1.7	1.310	0.548	70
24	<i>Library and Information Science Research</i>	1	Social Sciences: Library and Information Sciences; Computer Science: Information Systems	Q1 Library and Information Sciences; Q2 Information Systems	4.3	1.768	0.782	100

No.	Journal title	Number of articles	Scopus Subject area	2022 Quartile	Cite Score 2022	SNIP 2022	SJR 2022	Score from the Ministry of Science and Higher Education*
25	<i>Library Philosophy and Practice</i>	1	Arts and Humanities; Philosophy; Social Sciences; Library and Information Sciences	-	-	-	0.235	40
26	<i>Library Review</i>	1	Social Sciences; Library and Information Sciences	-	-	-	-	70
27	<i>Litteraria Copernicana</i>	1	Social Sciences; Cultural Studies	-	-	-	-	40
28	<i>Meander</i>	1	Arts and Humanities; History; Arts and Humanities; Language and Linguistics; Arts and Humanities; Archeology; Social Sciences; Classics; Social Sciences; Archeology;	-	-	-	-	70
29	<i>Neuphilologische Mitteilungen</i>	1	Arts and Humanities; Language and Linguistics; Social Sciences; Linguistics and Language;	-	-	-	0.102	20
30	<i>New Review of Academic Librarianship</i>	1	Social Sciences; Education; Computer Science; Information Systems; Computer Science; Computer Networks and Communications; Computer Science; Human-Computer Interaction	Q2 Education Q3 Information Systems Q3 Computer Networks and Communication Q4 Human-Computer Interaction	2.0	0.828	0.243	40
31	<i>Ons Gesteljk Erf</i>	1	Arts and Humanities; Religious Studies; Arts and Humanities; History	Q4 Religious Studies; Q3 History;	0.1	0.522	0.101	70

No.	Journal title	Number of articles	Scopus Subject area	2022 Quartile	Cite Score 2022	SNIP 2022	SJR 2022	Score from the Ministry of Science and Higher Education ²
32	<i>Orbis Idearum</i>	1	Arts and Humanities: Religious Studies; Arts and Humanities: Philosophy; Arts and Humanities: Arts and Humanities (miscellaneous); Arts and Humanities: History and Philosophy of Science; Social Sciences: Sociology and Political Science;	Q3 Religious Studies; Q3 Philosophy Q3 Arts and Humanities (miscellaneous); Q4 History and Philosophy of Science; Q4 Sociology and Political Science;	0.3	0.614	0.101	40
33	<i>Polish Libraries</i>	1	Arts and Humanities: Museology; Arts and Humanities: Arts and Humanities (miscellaneous); Arts and Humanities: History; Social Sciences: Library and Information Sciences	Q4 Museology; Q4 Arts and Humanities (miscellaneous) Q4 History; Q4 Library and Information Sciences;	0.1	-	0.103	100
34	<i>Portal - Libraries and the Academy</i>	1	Social Sciences: Library and Information Sciences	Q2 Library and Information Sciences;	1.9	1.072	0.630	100
35	<i>Poznańskie Studia Slawistyczne [Poznań Slavic Studies]</i>	1	Arts and Humanities: Literature and Literary Theory; Arts and Humanities: History; Social Sciences: Cultural Studies; Arts and Humanities: Language and Linguistics; Social Sciences: Linguistics and Language; Social Sciences: Anthropology; Social Sciences: Communication	Q4 Literature and Literary Theory; Q4 History; Q4 Cultural Studies; Q4 Language and Linguistics; Q4 Linguistics and Language; Q4 Anthropology; Q4 Communication	0.1	0.014	0.139	100
36	<i>Prace Filologiczne. Literaturoznawstwo [Philological Works. Literary Studies]</i>	1	Arts and Humanities: Literature and Literary Theory	-	-	-	0.100	100

No.	Journal title	Number of articles	Scopus Subject area	2022 Quartile	Cite Score 2022	SNIP 2022	SJR 2022	Score from the Ministry of Science and Higher Education*
37	<i>Problemos</i>	1	Arts and Humanities: Philosophy	Q3 Philosophy	0.3	0.700	0.164	40
38	<i>Przeźdźdźaniec</i>	1	Arts and Humanities: Literature and Literary Theory; Social Sciences: Cultural Studies	Q4 Literature and Literary Theory; Q4 Cultural Studies	0.1	0.233	0.100	70
39	<i>Roczniki Humanistyczne</i>	1	Arts and Humanities: Literature and Literary Theory; Arts and Humanities: Visual Arts and Performing Arts; Social Sciences: Linguistics and Language;	Q4 Literature and Literary Theory; Q4 Visual Arts and Performing Arts; Q4 History; Q4 Linguistics and Language	0.1	0.186	-	100
40	<i>Science-Fiction Studies</i>	1	Arts and Humanities: Literature and Literary Theory	Q2 Literature and Literary Theory	0.3	0.498	0.139	70
41	<i>Vox Patrum</i>	1	-	-	-	-	-	140

Source: Own elaboration.

Three groups of magazines emerged in the surveyed collection:

1. journals focused solely on LIS (11 titles),³
2. journals focused on LIS and associated disciplines (11 titles),⁴
3. journals focused on other disciplines (19 titles).⁵

The first group of journals was dominated (9 out of 11 titles) by periodicals addressing issues from all areas of LIS (such as *College and Research Libraries*, *Portal - Libraries and the Academy*, *Journal of Librarianship and Information Science*, *Global Knowledge, Memory, and Communication*, *Libri*). In group two, the most common location of published articles was the *Journal of Academic Librarianship* (10 articles), assigned to LIS and education. The remaining configurations included the most prevalent journals in LIS and Computer Science (4 titles) and LIS and History (2 titles). Single titles were assigned to LIS and linguistics, LIS and communication, LIS and medicine, and LIS and philosophy. The third group of journals consisted of various disciplines, including humanities (literary theory, musicology, history, philosophy, archaeology, cultural and religious sciences), social sciences (education, economics and finance, cultural studies, anthropology, communication, political science, sociology), exact and natural sciences (computer science).

The first group of academic library journals published 22 articles (29.7% of the total) by Polish researchers, while the second group contributed 27 articles (36.5%), and the third group contributed 25 articles (33.8%). Regarding journals exclusively focused on LIS or

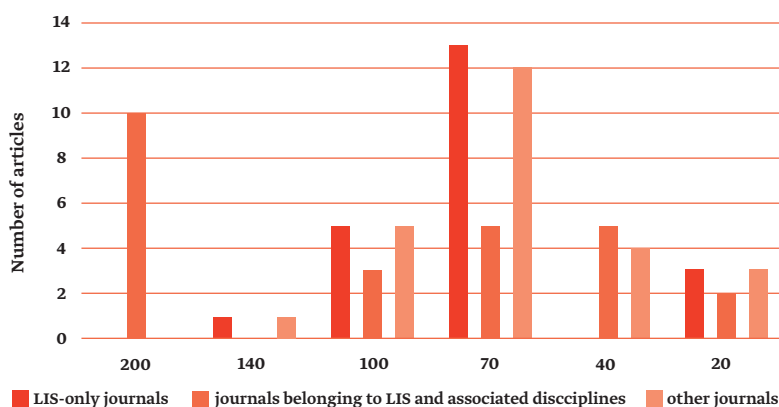
3 In table 1, marked nos: 2, 3, 6, 14-17, 21-22, 26, 34.

4 In table 1, marked nos: 1, 5, 7-8, 11-12, 18, 20, 24-25, 33. The Polish journal *Folia Toruniensia* was categorised in this group, even though it did not have an official profile in the Scopus database until 2023. Based on the ICI Journals Master List database (Index Copernicus), it was determined that the journal publishes articles in the field of social communication sciences, which encompasses LIS in Poland.

5 In table 1, marked nos: 4, 9, 10, 13, 19, 23, 27-32, 35-41. The Polish journal *Vox Patrum* was categorised in this group, even though it did not have an official profile in the Scopus database until 2023. Based on the ICI Journals Master List database (Index Copernicus), it was determined that the journal publishes articles in the field of patristics and the study of Christian antiquity, which encompasses LIS in Poland.

associated with LIS and other related disciplines, within the Scopus database, seven of these journals were classified within the first quartile (Q1) of LIS journals, eight were in the second quartile (Q2), two in the third quartile (Q3), and three in the fourth quartile (Q4). In total, 39 articles (51%) were published by Polish researchers in the most prestigious journals (Q1 and Q2).

Taking into account the number of points allocated for journal publications, Polish researchers published the most texts in journals assigned 70 points (32 articles), according to the scientific journal list released by the Minister of Education and Science on 5 January 2024 (*Communiqué*, 2024). Another group, considerably smaller in number, comprised journals with a score of 100 (13 articles). The highest scores (140 and 200 points) were awarded to 12 articles (2 and 10, respectively).



GRAPH 3. Number of articles on academic libraries by Polish researchers issued between 1980 and 2023 found in the Scopus database, taking into account the number of ministerial points awarded for their publication.

Source: Own elaboration.

The study demonstrates that 86 authors affiliated with Polish academic institutions published articles on academic libraries in journals indexed in the Scopus database between 1980 and 2023.

TABLE 2. PUBLICATIONS ON ACADEMIC LIBRARIES BY POLISH RESEARCHERS ISSUED BETWEEN 1980 AND 2023 FOUND IN THE SCOPUS DATABASE BASED ON THE DATABASE RECORDS

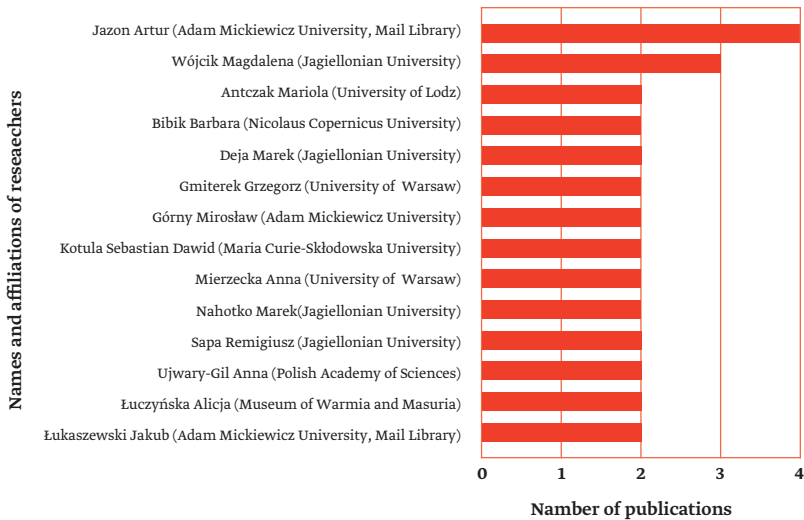
Affiliating institution	Number of authors from the institution
University of Warsaw	15
Jagiellonian University	14
Adam Mickiewicz University in Poznań	11
Nicolaus Copernicus University in Toruń	11
AGH University in Cracow	3
The John Paul II Catholic University of Lublin	3
Medical University of Gdańsk	3
Polish Academy of Sciences	3
University of Gdańsk	3
Military University of Technology, Warsaw 1980.	2
University of Łódź	2
University of Wrocław	2
Cracow University of Technology	1
John Paul II University of Applied Sciences in Białą Podlaska	1
Kazimierz Wielki University in Bydgoszcz	1
Łódź University of Technology	1
Maria Curie-Skłodowska University in Lublin	1
Museum of Warmia and Masuria in Olsztyn	1
Pomeranian Library in Szczecin	1
Silesian Library in Katowice	1
University of Białystok	1
University of Information Technology and Management in Rzeszów	1
University of National Education Commission in Cracow	1
University of Rzeszów	1
University of Silesia, Katowice	1
Wrocław University of Science and Technology	1
TOTAL	86

Source: Own elaboration.

The most prominent contributors to the analyzed publications were researchers from the University of Warsaw and Jagiellonian University, Poland's two preeminent academic institutions. The

second place was occupied ex quo by researchers from Adam Mickiewicz University in Poznań and Nicolaus Copernicus University in Toruń. The remaining institutions had a lower level of representation in comparison to their counterparts. Interestingly, of the 26 affiliations, 71 authors originated from the 16 Polish universities ranked among the 20,531 institutions in “The Centre for World University Rankings 2023” (*Global*, 2023).

Most of the 79 publications were single-author papers (71%). The remaining publications were co-authored by two (20.2%), three (3.8%), or four researchers (5%). The names of researchers who have published the most texts on the subject of academic libraries from 1980 to 2023, as documented in the Scopus database, are listed in Graph 4, along with their affiliations.



GRAPH 4. Polish authors with the most publications on academic libraries between 1980 and 2023, as documented in the Scopus database records.

Source: Own elaboration.

As for co-authored publications (23), the articles surveyed were dominated by texts produced in collaboration between national researchers (16), mainly from the same institutions (12). In four oth-

er instances, collaboration was observed between researchers from the Nicolaus Copernicus University in Toruń and the University of Warsaw (1), the Art Institute of the Polish Academy of Sciences (1), and the library staff of the Łódź University of Technology and the Cracow University of Technology (1), as well as representatives of the biological sciences from the University of Gdańsk and the medical library of the Gdańsk Medical University (1).

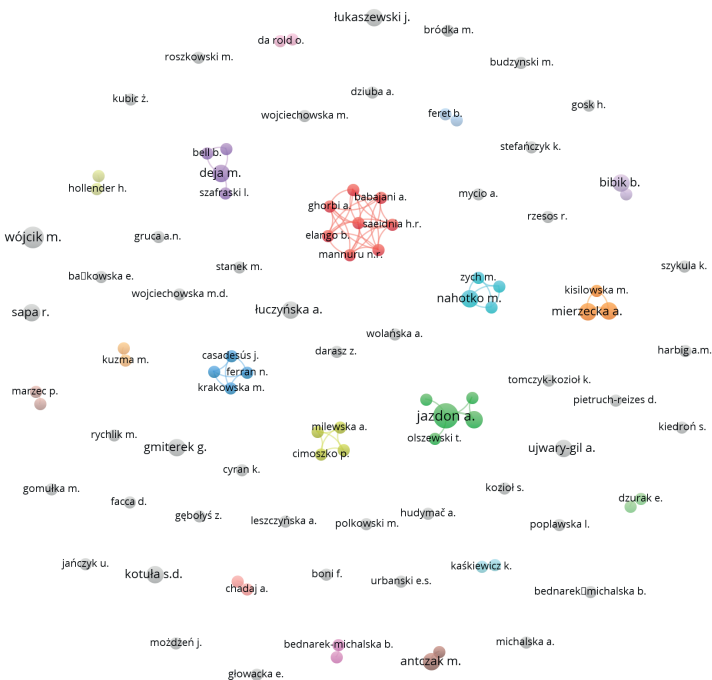


FIG. 1. Co-authored publications on academic libraries between 1980 and 2023 found in the Scopus database records.
Source: Own elaboration.

Only 6 of the 23 publications (7.5% of the total analyzed publications) were produced in international collaboration: two articles with partners from Lithuania (Vilnius University), one in collaboration with researchers from Iran (Shahid Beheshti University; Tarbiat Modares University University of

Tehran), India (Rajagiri College of Social Sciences) and the United States (Universit of North Texas), one with authors from Spain (Universitat Oberta de Catalunya; IRTA, Lleida) and one with researchers from the United States (College of Staten Island). The text, which involved researchers from as many as four countries, featured eight authors, including one from Poland (Marcin Kozak from the University of Information Technology and Management in Rzeszów).

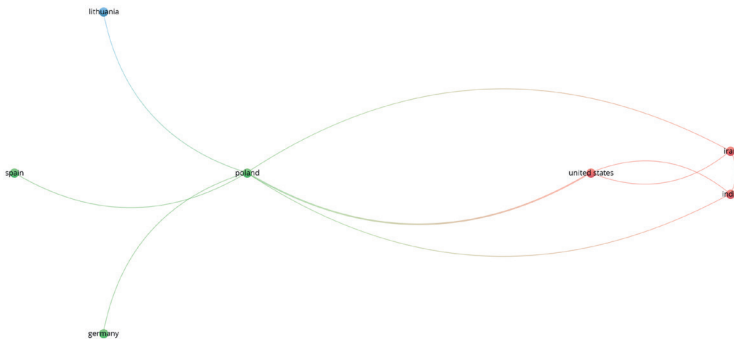


FIG. 2. International cooperation diagnosed in academic library research articles 1980-2023 as revealed by Scopus database records.
Source: Own elaboration.

Of the 79 texts, only 39 (48%) were cited, and 35 (44%) were additionally provided with altmetrics.⁶ A total of 260 citations were established. The highest number of citations were for articles published in *Library Hi Tech* (55 citations) and *Journal of Academic Librarianship* (54 citations). Additionally, texts published in the periodicals *Electronic Library* (30 citations), *New Review of Information Networking* (21 citations), and *Library Management* (20 citations) gained relative popularity.

6 The authors employ the term altmetrics in a more restricted manner, encompassing a set of indicators that measure the influence of an individual scientific article through social metrics (*article-level metrics*, ALM; cf. Fenner & Linn, 2015).

TABLE 3. ARTICLES ON ACADEMIC LIBRARIES BY POLISH RESEARCHERS PUBLISHED BETWEEN 1980 AND 2023 WITH CITATIONS AND ALTMETRICS DISCLOSED IN THE SCOPUS DATABASE

No.	Title	Author/Authors	Title of journal/post-conference materials	Year of issue	Number of citations in Scopus	Altmetrics			
						Mendeley	Facebook	Blogs	Wikipedia
	Internet of Things - potential for libraries	Wójcik M.	<i>Library Hi Tech</i>	2016	50	193	0	0	0
	Digital transformation readiness: perspectives on academia and library outcomes in information literacy	Deja M. Rak D. Bell B.	<i>Journal of Academic Librarianship</i>	2021	25	644	35	0	0
	Polish university libraries social networking services during the COVID-19 pandemic spring term lockdown	Gmiterek G.	<i>Journal of Academic Librarianship</i>	2021	19	127	23	0	0
	Organizational network analysis: A study of a university library from a network efficiency perspective	Ujwary-Gill A.	<i>Library & Information Science Research</i>	2019	18	76	0	0	0
	Academic library website functions in the context of users' information needs	Mierzecka A. Surminas A.	<i>Journal of Librarianship and Information Science</i>	2018	16	121	0	1	0
	Enriching e-learning metadata through digital library usage analysis	Ferran N. Casadesús J. Krakowska M. Minguillón J.	<i>Electronic Library</i>	2007	16	78	0	0	0
	The Future of the Academic Library and the Academic Librarian: A Delphi study reloaded	Feret B. Marcinek M.	<i>New Review of Informing Networking</i>	2005	15	45	0	0	0
	Creating a job description for an electronic resources librarian	Bednarek-Michałska B.	<i>Library Management</i>	2002	12	30	0	0	0
	E-learning model for Polish libraries: BIBWEB	Bednarek-Michałska B. Wobódzko A.	<i>Electronic Library</i>	2007	7	32	0	0	0

No.	Title	Author/Authors	Title of journal/post-conference materials	Year of issue	Number of citations in Scopus	Altmetrics			
						Mendeley	Facebook	Blogs	Wikipedia
	Evaluation of the accessibility of archival cartographic documents in digital libraries	Kuzma M. Mościcka A.	<i>Electronic Library</i>	2018	6	36	0	0	0
	E-learning in academic libraries	Gruca A. N.	<i>New Review of Information Networking</i>	2010	6	50	0	0	0
	The roles of American and Polish academic library Web sites: A comparative study.	Sapa R.	<i>Libri</i>	2005	6	16	0	0	0
	Social media aesthetics as part of academic library merchandising	Wójcik M.	<i>Library Hi Tech</i>	2022	5	18	0	0	0
	Researchers' expectations regarding the online presence of academic libraries	Mierzecka A. Kisłowska M. Suminas A.	<i>College and Research Libraries</i>	2017	5	49	2	0	0
	Bibliometrics and academic staff assessment in Polish university libraries - current trends	Ryś D. Chadał A.	<i>Liber Quarterly</i>	2016	5	25	0	1	0
	A survey of medical researchers indicates poor awareness of research data management processes and the role of data librarians	Milewska A. Wisniewska N. Cimoszko P. Rusakov J.	<i>Health Information and Libraries Journal</i>	2022	5	51	31	0	0
	Big data-driven investigation into the maturity of library research data services (RDS)	Nahotko M. Zych M. Januszko-Sza-kiel A. Jaskowska M.	<i>Journal of Academic Librarianship</i>	2023	3	55	2	1	0
	Social capital in the theory and research of LIS professionals in the light of the literature on the subject. Review of current knowledge	Wojciechowska M.	<i>Global Knowledge Memory And Communication</i>	2022	3	10	0	0	0

No.	Title	Author/Authors	Title of journal/post-conference materials	Year of issue	Number of citations in Scopus	Altmetrics			
						Mendeley	Facebook	Blogs	Wikipedia
	Manuscripts of The Szczecin Marian Gymnasium in The Collection of The University Library in Toruń	Mycio A.	<i>Przegląd Zachodniopomorski</i>	2020	3	0	0	0	0
	Incunables of The Old Gymnasium Library in Szczecin - An Attempt at Reconstruction of the Collection	Michalska A.	<i>Przegląd Zachodniopomorski</i>	2020	3	1	0	0	0
	Research on the impact of academic libraries - areas, methods, indicators	Głowacka E.	<i>Library Management</i>	2019	3	54	0	0	0
	A new look at the university libraries in context: European Research Area	Pietruch-Reizes D.	<i>Library Management</i>	2010	3	30	0	0	0
	The linguistic stratification in the Cambridge DD copy of Chaucer's Canterbury Tales	Thaisen J. Da Rold O.	<i>Neuphilologische Mitteilungen</i>	2009	3	0	0	0	0
	Remote usability testing carried out during the COVID-19 pandemic on the example of Primo VE implementation in an Academic Library	MARCH P. Piotrowski D. M.	<i>Journal of Academic Librarianship</i>	2023	2	9	98	0	0
	Modelling doctoral dissertations in Wikidata knowledge graph: Selected issues	Roszkowski M.	<i>Journal of Academic Librarianship</i>	2023	2	10	0	0	0
	The Importance and Level of Individual Social Capital among Academic Librarians	Wojciechow-ska M.	<i>New Review of Academic Librarianship</i>	2023	2	13	0	0	0
	"Those clunky things you have to carry around". Textual materiality in Vernor Vinge's Rainbows End	Kozioł S.	<i>Science-Fiction Studies</i>	2015	2	11	0	0	0

No.	Title	Author/Authors	Title of journal/post-conference materials	Year of issue	Number of citations in Scopus	Altimetrics			
						Mendeley	Facebook	Blogs	Wikipedia
	Anthony Jenkinson's unique wall map of Russia (1562) and its influence on European cartography	Szykula K.	BELGEO	2008	2	0	1	0	2
	The implementation of information technology projects in Polish research and academic libraries in the early 1990s: questions of scope and effectiveness	Górny M. Jazdon A.	<i>Library Management</i>	1997	2	5	0	0	1
	Problems in the Management and Operation of Academic Libraries in Poland during the Transition Period	Jazdon A. Olszewski T.	<i>Library Review</i>	1994	2	7	0	0	0
	Library model of community resilience during the war. Activities of selected Polish academic libraries addressed to Ukrainians	Antczak M. Gruszka Z.	<i>Journal of Academic Librarianship</i>	2023	1	6	99	0	0
	Use of Facebook fan pages in Polish academic libraries (2009–2022)	Gmiterek G.	<i>Journal of Academic Librarianship</i>	2023	1	11	0	0	0
	A Not Very Pleasant Story: Vicissitudes of Stefan Srebrny's Translation of Aeschylus	Bibik B.	<i>Meander</i>	2020	1	0	0	0	0
	The role of the academic library in disseminating grey literature - Adam Mickiewicz university repository as a case study	Rychlik M.	<i>Grey Journal</i>	2016	1	14	0	0	0
	Thannenwald - The lost manuscript from Eiblag/Eiblag partially rediscovered	Leszczyńska A.	<i>Hudebni Veda</i>	2014	1	0	0	0	0

No.	Title	Author/Authors	Title of journal/post-conference materials	Year of issue	Number of citations in Scopus	Altmetrics			
						Mendeley	Facebook	Blogs	Wikipedia
	The Role of Legal Deposit of Books in the Polish Library Scheme: The Case of Poznań University Library	Bródlka M.	<i>Slavic and East European Information Resources</i>	2014	1	4	0	0	0
	Metamorphosis of academic libraries in post-communist Poland: Focusing on access	Dzurak E. Kasprzyk A.	<i>Journal of Academic Librarianship</i>	2010	1	16	0	0	0
	Access to scholarly output of academic staff: Bibliographic databases and institutional repositories in Polish academic libraries	Sapa R.	<i>Libri</i>	2010	1	29	0	0	0
	Implementing the HORIZON computing system in the university library in Poznań	Rucińska-Nagórny A. Jazdon A.	<i>Electronic Library</i>	2001	1	4	0	0	0
	TOTAL	-	-	-	260	1880	291	3	3

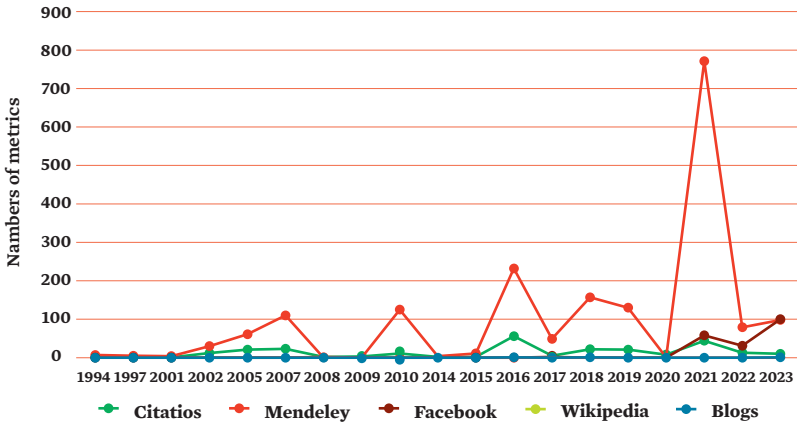
Source: Own elaboration.

The most prevalent category among the 39 articles was publications featuring alternative metrics from a single source 24. Ten publications had metrics from two distinct sources, and only one was based on three sources. Four publications lacked altmetrics data. The Mendeley manager was the most frequent source of altmetrics (1880 mentions for 34 articles). Articles were cited far less frequently on Facebook (291 references for 8 articles), blogs (3 mentions for 3 articles), and Wikipedia (3 mentions for 2 articles).

The data collected demonstrates a similarity between the distribution of citations and metrics derived from the Mendeley manager for the 39 publications. Both sources had the highest publication citations occurring in 2016 (citations: 56; Mendeley: 232) and 2021 (citations: 44; Mendeley: 771). However, in the other periods (up to 2016, between 2016 and 2020, and after 2021), the number of citations and altmetrics was significantly lower. It was also observed that there was no exponential year-on-year increase in the number of citations. Nonetheless, the frequency of publication mentions in Mendeley manager has increased in the last three years (2021-2023), reaching 954, representing 50.7% of the identified occurrences in Mendeley. A similar trend was observed for mentions originating from Facebook, with publications from 2021-2023 reaching 288, accounting for 99% of the total identified mentions on Facebook. Regarding the other sources - appearances on blogs or Wikipedia- metrics' presence remained very low (between 1 and 2 metrics in the respective years).

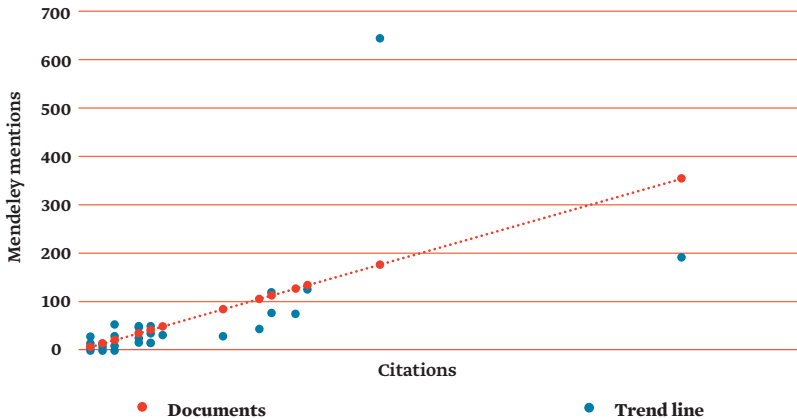
With reference to the Mendeley manager and Facebook (the two most commonly referenced altmetrics sources), the data gathered supports the conclusion that a correlation exists between the number of citations and metrics. The Pearson coefficient⁷ with a value of 0.62 for Mendeley proves the existence of a strong positive

7 The Pearson correlation coefficient quantifies the strength of the linear correlation between the random variables. A linear relationship occurs when the points on a scatter plot of two variables are roughly aligned in a straight line. Correlation values between 0 and 0.3 are assumed to indicate a weak relationship, between 0.3 and 0.5 a moderately strong relationship, and between 0.5 and 1 a strong or very strong relationship.



GRAPH 5. Citations and altmetric indices of articles on academic libraries by Polish researchers published between 1980 and 2023 revealed in the Scopus database distributed over time.
Source: Own elaboration.

correlation (cf. graph 6). In contrast, a value of -0.01 for Facebook indicates a weak negative correlation (cf. graph 7). The analyses indicate a positive correlation between the number of citations and the number of metrics in the Mendeley application for most publications, with a few deviations. However, there was no clear linear



GRAPH 6. The correlation between the number of citations and metrics from the Mendeley manager for Polish articles devoted to academic libraries.
Source: Own elaboration.

DISCUSSION AND CONCLUSIONS

A total of 79 publications on academic libraries were analyzed. 76 were assigned to Subject Areas in the Scopus database: Social Sciences: 29 were additionally assigned to Arts and Humanities, 12 to Computer Science, and one to Medicine. The remaining three publications - one each - were allocated to Earth and Planetary Sciences, Engineering and Economics, Econometrics, and Finance. This demonstrates the interdisciplinary nature of LIS, which has also been emphasized by other researchers of the Polish LIS output (Stefaniak, 1987; Pindłowa, 1988; Drabek, 2013; Nabiłczyk, 2014; Osiński, 2019).

The high proportion of articles in the analyzed collection (96%) confirms the findings of other researchers, indicating that in recent years, the number of articles has been increasing at the expense of chapters from collective publications (Kulczycki et al., 2018). Consequently, one can readily observe the so-called “long tail” phenomenon characterized by a substantial distribution of articles in as many as 41 journals. Conversely, the modest representation (29.7%) of texts published in LIS-only journals could indicate that Polish researchers had a greater inclination towards publishing in journals that were not exclusively dedicated to LIS but encompassed various disciplines and had a multidisciplinary approach. However, it is worth noting that the names of Polish researchers also appeared in eight periodicals among the top international journals cited by LIS researchers (Kolasa, 2019; Jan & Hussain, 2021). The limited number of articles scoring 100, 140, and 200 points (representing 17.5%, 2.7%, and 13.5%, respectively) should be attributed to the challenges faced by Polish researchers in “getting” into the publication pages of esteemed journals, as identified by other researchers (the so-called “glass ceiling”) (Antczak et al., 2023; Lund et al., 2023). On the flip side, the considerable percentage of articles receiving a score of 70 points (43.2%) might be a consequence of the fact that the Polish Ministry of Science and Higher Education’s list predominantly includes periodicals which are precisely rated at 70 points (cf. *Report*, 2023). Given the chang-

ing fortunes of Polish LIS journals on ministerial lists,⁸ it is nevertheless encouraging that Polish researchers working on niche topics in academic libraries are finding space to publish in foreign journals. Given the linguistic aspect of the material collected, it is not surprising that it is dominated by publications prepared in English. This can be attributed to the analysis focusing primarily on international journals publishing articles in this language.

The study's findings show that the output of Polish researchers in the field of LIS is hardly visible in the Scopus database. This database is primarily notable for the activities of people from research universities. Following the findings of Głowacka and Woźniak-Kasperek that 137 scholars represented the independent discipline of LIS until 2018 (Głowacka & Woźniak-Kasperek, 2023a),⁹ the number of 86 authors revealed in the present study seems extremely modest, even more so when one considers that besides those employed in research positions, the authors of the publications found were also university library staff and researchers from non-LIS-related units. Furthermore, an analysis of the authors' names documented in the Scopus database of publications supports the assertion that this database fails to acknowledge the scholarly output of esteemed academic library researchers. This is also confirmed by the findings of Głowacka and Woźniak-Kasperek, who for the 2018–2021 period (i.e., only five years), relying on the resources of the *Polska Bibliografia Naukowa* for 138 researchers, identified 453

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- 8 Between 2010 and 2024, 9 to 32 Polish LIS journals were included in the various lists of scoring journals of the Ministry of Science and Higher Education (MNiSW) (Kowalska-Chrzanowska, 2020).
 - 9 Until 2018, LIS was recognized as an independent scholarly discipline, classified under the humanities. Following an administrative reclassification of scientific fields and disciplines, it was officially designated as part of the social sciences and integrated into communication and media sciences in 2019. Researchers representing LIS up until 2018, following the reclassification, could make a choice regarding the discipline. Most of them (70.8%) dedicated 100% of their entire output to the social sciences, particularly the field of social communication and media. The rest opted for other disciplines (including cultural and religious studies, history, literary studies, linguistics) exclusively or combined them in varying proportions (25%/75%; 50%/50%) with social communication and media sciences (Głowacka & Kasperek-Woźniak, 2023a).

publications in book study and 159 in library science (Głowacka & Woźniak-Kasperek, 2023b), while the Scopus database for a period of 43 years registered 79 publications on academic libraries by Polish representatives of LIS and related disciplines, accounting for 13% of the publications. Hence, per the findings of other scholars, it is imperative to highlight that the Scopus database, along with other bibliometric databases, is not a reliable tool for appraising or promoting scholarly output, particularly in the context of narrow or specialized topics and disciplines such as LIS (Osiński, 2014; Barik, 2017; Kowalska & Osińska, 2018; Kowalska-Chrzanowska & Krysiński, 2020).

The limited extent of collaboration between Polish researchers involved in academic libraries and foreign partners is, in fact, not surprising. On the contrary, it reflects a common trend where representatives of particular social sciences and humanities, such as LIS, have limited contact with their foreign counterparts. Some of the reasons for this include language barriers hindering contact and cooperation with colleagues from other countries, limited financial resources for conducting international research, the national or local nature of the research being conducted, differences in the structure of science systems, including issues related to the evaluation of research results and scientific promotion, and, finally, simply a lack of insight into the possibilities of cooperation with foreign partners. Such limitations in the processes of internationalization of research results in the social sciences and humanities have already been pointed out by other researchers (Abdulhayoglu & Thijs, 2018; Osiński, 2019; Antczak et al., 2023; Lund et al., 2023).

The analysis of citations and altmetric indices provides further evidence to support the thesis regarding the low visibility of Polish researchers' output and minimum impact on world science. Out of 79 papers, only 39 were cited, and 35 had altmetrics. The literature emphasizes that altmetrics have a more significant impact on the dissemination and visibility of published work compared to traditional metrics and also result in faster generation of future citations (Eysenbach, 2011; Jaskowska, 2016), but by observing

the temporal distribution of the metrics of the analyzed articles, it can only be cautiously assumed that the increasing number of readers on Mendeley may generate an increase in citations. In contrast, the likelihood of Facebook mentions translating into a surge in citations of the analyzed articles in the near future is low. Such a conclusion seems to coincide with the findings of Maflahi and Thelwall, who also proved positive, strong correlations (with a value of 0.6) between the number of citations (Scopus database) and the number of metrics from the Mendeley manager for four LIS journals (*Information Processing & Management*, *Library and Information Science Research*, *Journal of Documentation*, *Journal of the American Society for Information Science*) (Maflahi & Thelwall, 2016).

The content analysis findings reveal a substantial interest in library and information processes and services regarding their evolutionary nature and research focus on electronic resources, services, and products. Conversely, issues such as research data management, the social capital of libraries, information literacy, and library architecture garnered moderate interest. A similar pattern in foreign publications was observed by Głowacka, who analyzed the thematic development of library science from 2003 to 2007, based on an analysis of the contents of three international journals (*College and Research Libraries*, *Library Quarterly*, and *Journal of Academic Librarianship*) (Głowacka, 2008), and Kamińska, who analyzed trends in the development of theoretical and methodological reflection in library science worldwide based on the contents of the Analytical Bibliography of Library and Information Science. Foreign Literature from 2000-2010 (Kamińska, 2017). Similar to the studies conducted by Kowalska, Głowacka, and Woźniak-Kasperek, the authors of the publications examined in this study did not express any interest in researching the behavior of library staff and library users (Kowalska, 2013; Głowacka & Woźniak-Kasperek, 2023b).

As demonstrated, the Scopus database in its present form is of limited use in monitoring the status and development trends of

LIS. Undoubtedly, the level of interest in academic libraries in Poland exceeds the representation provided by the Scopus database. The low visibility of Polish LIS researchers' output is primarily attributable to the specificity of their research (their national perspective - 75% of all analyzed articles), the results of which are mainly published in the pages of Polish LIS scientific journals, that for various reasons (including non-adherence to restrictive quality criteria, violation of publication ethics, low citation rate, complicated and protracted indexing process) are not indexed in the Scopus database (Drabek, 2018).

DECLARATION OF INTERESTS

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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