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Article Information / Makale Bilgisi

To cite this article / Bu makaleye atıf yapmak için:

Nazarovets, S., & Nazarovets, M. (2018). Local journals and misleading metrics: A quantitative analysis of publication activity of LIS PhD students in Ukraine. *Bilgi Dünyası*, 19(1), 85-104. doi: 10.15612/BD.2018.643

Paper type / Makale türü: Opinions / Görüşler

Doi: 10.15612/BD.2018.643

Received / Geliş Tarihi: 10.02.2018

Accepted / Kabul Tarihi: 26.06.2018

Online Published / Elektronik Yayınlanma Tarihi: 28.06.2018

İletişim / Communication

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Local Journals and Misleading Metrics: A Quantitative Analysis of Publication Activity of LIS PhD Students in Ukraine

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Abstract

The Ukrainian library and information science/studies (LIS) accumulated many problems that impede the quality training of library staff. In the process of reforming education and science in Ukraine, several initiatives have been implemented at the legislative level for improving quality of research and its presentation by Ukrainian scientists, including research in the library science. In particular, in order to obtain a PhD in Ukraine, the applicant must publish an article in a foreign journal, which, in the opinion of the promoters of the government initiative, should improve the presentation of scientific achievements of Ukrainian scientists in the world. The paper presents the results of the study of the publishing activity of PhD students in the Ukrainian library science (2015-2017). Data on articles in non-Ukrainian journals are received from the synopses of the theses that were in open access. The journals in which these articles were published were analyzed by country of origin, languages of publications, indexing in the leading abstracts and citation databases and the "misleading metrics"; information about the peer review process. The results indicate that Ukrainian LIS PhD students published their papers in the journals with a limited reader audience, mainly in Ukrainian journals and regional journals of the countries bordering with Ukraine. In some journals are noticeable the dubious editorial policy. In the article, the reasons for it are discussed, and some recommendations for overcoming the undesirable practice are provided.

Keywords: Postgraduate education, publication activity, PhD, thesis, LIS, Ukraine.

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Öz

Ukrayna kütüphane ve enformasyon bilimi/çalışmaları, kütüphane personelinin kaliteli eğitimini engelleyen birçok problemi tespit etmiştir. Ukrayna'da eğitimin ve bilimin reform sürecinde, kütüphanecilik bilimindeki araştırmalar da dâhil olmak üzere Ukraynalı bilim insanlarının yapacak olan araştırmaların ve sunumlarının kalitesinin geliştirilmesi için bir dizi yasal girişimlerde bulunulmuştur. Özellikle, Ukrayna'da bir doktora derecesi alabilmek için doktor adayının yabancı bir dergide makale yayımlaması gerekmektedir ki bu, hükümetin girişimlerini destekleyenlerce dünyada Ukraynalı bilim insanlarının bilimsel başarılarının sunulması için bir fırsat olarak değerlendirilmektedir. Bu araştırmada, Ukrayna kütüphanecilik bilimindeki (2015-2017) doktora öğrencilerinin yayın faaliyetlerinin incelenmesinin sonuçları sunulmaktadır. Ukrayna kökenli olmayan dergilerdeki makalelerin bilgileri açık erişimi bulanan tezlerin özet kısmından alınmıştır. Makalelerin yayımlandığı bu dergiler hakem değerlendirme sürecindeki bilgiler kapsamında menşei ülke, yayın dilleri, öz (abstrakt) ve atıf veri tabanlarında dizinlenme ve "yanıltıcı metrikler" bakımından analiz edilmiştir. Sonuçlar, kütüphane ve enformasyon alanındaki Ukraynalı doktora öğrencilerinin makalelerini kısıtlı okuyucusu olan başlıca Ukrayna dergilerinde ve Ukrayna'ya sınır olan ülkelerin dergilerinde yayımladıklarını göstermektedir. Bazı dergilerde dikkat çeken şüpheli editörlük politikaları bulunmaktadır. Bu araştırmada, bunların nedenleri tartışılmakla birlikte istenmeyen uygulamaların önüne geçilebilmesi için bazı tavsiyelerde bulunulmuştur.

Anahtar sözcükler: Lisansüstü eğitim, yayımcılık faaliyeti, doktora, tez, kütüphane ve enformasyon bilimi, Ukrayna.

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Introduction

Ukraine has gained independence in 1991 and got an opportunity to develop its own national system of library education. Ukraine inherited from the Soviet Union a huge network of libraries (over 39,000 libraries of various types, including libraries of higher education institutions, technical, agricultural, medical, academic, educational, public libraries for adults, youth, children, libraries for visually impaired people) ("Global Library Statistics", 2018). The powerful Ukrainian library network requires appropriate staffing by highly skilled professionals. However, a number of problems related to the proper training of specialists have been accumulated in Ukraine in the field of library education, since the Soviet times.

Unlike the leading libraries in Europe and the United States, which actively introduced new information technologies into their work, the work of libraries in the Union of Soviet Socialist Republics (USSR) was more focusing on a creation and dissemination of propaganda materials. That adversely affected the quality of the library education and did not allow Soviet librarianship to form a strong research culture (Haigh, 2009). With the collapse of the Soviet Union, Ukrainian librarianship was freed from the destructive influence of the Marxism-Leninism ideology and needed a development of new educational programs and an introduction of computer technologies into the educational process and the work of libraries. But Ukraine failed to quickly carry out the necessary reforms for modernizing library education in difficult economic Ukrainian realities of the early 90's the XXth Century. This process had been delayed for many years.

Literature Review

The support of library education and science in communist Ukraine was based on the standard Soviet model – full state control over the content of library collections, the content of curricula and teaching methods for future library specialists, since Soviet libraries not only fulfilled the function of meeting information needs of users but also served as a tool of support and the spread of communist ideology.

Librarians from the independent countries that emerged after the collapse of the Soviet Union were granted the right to develop a library system and education in accordance with their national needs. However, new socio-economic realities slowed down the process considerably, and many library specialists who are accustomed to working under the Soviet model have not been able to adapt to the new requirements. According to Gibradze's (2001) successful definition, the library systems of post-Soviet countries were forced to go through three contingent stages: the collapse of the existing library system, the search for ways to overcome the crisis, and, finally, the realization of real steps for building a modern library system.

In the USSR, each library received books through a single system acquisition of library collections controlled from Moscow. Librarians in post-Soviet countries were forced to rethink the functions of their institutions and turn themselves from simple custodians of book collections to modern knowledge managers. However, most library managers were not trained to make such bold decisions and to look for ways to meet the new information needs that citizens of the young independent states were expecting from them. Therefore, libraries for years have relied on old Soviet models of work and education which were already inactive, and, on the contrary, ruined the image of libraries in the eyes of society (Johnson, 2013a). In addition, many libraries in post-Soviet countries have been victims of inadequate public funding and could not even provide basic energy supply and heating for reading rooms, not to mention the subscription of books, journals and electronic databases (Johnson, 2013b).

In the early 90s librarians in Ukraine also proved unprepared for new demands, as most, and especially librarians in leadership positions, were trained in the Soviet system. In addition, most Ukrainian libraries quickly became specialized, which influenced the process of forming their collections and services. At the same time, the curricula in higher education institutions were further oriented mainly on general issues of library science. This created some discrepancy between the market needs and the training of library specialists (Haigh, 2007). To solve the problem, Ukrainian educational institutions began to change their curricula, first of all, by developing and adding new courses in information technology to meet the needs of an information-oriented society. Relatively fast, it has brought positive results and new library services based on Web 2.0 technologies have been introduced into the work of Ukrainian libraries (Skogen & Smith, 2009).

The training of highly skilled workers for the library industry, which is also rapidly changing due to the fast development of computer technology and information technology, requires properly trained teachers who are aware of the latest trends in the library industry. However, unsatisfactory subscription to specialized literature, the lack of financial capacity for participation in international seminars and conferences, and poor English language knowledge create additional obstacles to the development of library education in post-soviet countries (Rahmatullaev, Ganieva, & Khabibullaev, 2017). Ukrainian librarians do not have the appropriate level of state support and access to information resources in comparison with librarians from developed countries. Therefore, the exchange of professional information, creation and support of international partnerships with library specialists of the world is vital for the development of library education and science in Ukraine (Benz, 2009).

At the same time, the effectiveness of all the scientific and educational institutions of the country depends largely on the filling of library collections, the quality of library services and the qualifications of librarians (Emmelhainz, 2017). Therefore, countries as they seek to develop their research potential, should be fully interested in the development

of libraries and the national library education system, promote the cooperation of domestic librarians with foreign colleagues, actively support the conduct of library scientific research and presentation of their in the leading international journals.

The analysis of publication activity allows us to understand how significant and influential in the world are the results of modern scientific research obtained, in particular, during the preparation of doctoral students in the field of LIS.

The leading world studies on the quantitative assessment of the productivity of scientists in the field of library and information sciences are devoted, first of all, to the study of highly cited English-language publications of authors from developed countries (Levitt & Thelwall, 2009; Ivanović & Ho, 2014). But from the data used in these studies, it is difficult to identify PhD students from the total number of authors. Although, for example, research conducted in Quebec shows that postgraduate students wrote about one-third of all publications in the province over the period 2000-2007. And this can testify they made a noticeable contribution to the development of their scientific fields. But the contribution of representatives of various branches is uneven: postgraduates from the humanities and social sciences have published much less papers than postgraduates from other scientific fields (Larivière, 2011). Similar conclusions were also obtained in the study of the publishing activity of individuals who received the doctoral degrees of American universities in the field of Library and Information Sciences in 1991-2000. About a third of graduates did not publish any scientific article during the 10-year (during the research-in-progress and post-doctoral periods). The rest of the graduates have published from one to 22 articles in these periods (Anwar, 2004).

Researchers on the quality of publishing activity of PhD students various scientific fields in developing countries are engaged in identifying problems and providing recommendations for the successful integration of their doctoral students into the scientific world. Among the problems are the lack of proper expert control (in particular, from the part of the scientific supervisors who should take care of the scientific activity of their PhD students), which leads to poor quality of scientific works (Jalaluddin Haider & Mahmood, 2007), and the spread of dangerous practices in the publication of articles in predatory journals (Ifijeh, 2017; Grančay, Vveinhardt & Šumilo, 2017).

The publishing activity of the Ukrainian PhD students in the field of library and information sciences was investigated for the first time in our study.

LIS Postgraduate study in Ukraine

There are many vocational schools in Ukraine (I-II accreditation level) for the preparation of middle-level library specialists, where graduates receive a professional certificate together with a diploma of secondary education; colleges and universities (III and IV accreditation levels), where graduates can receive a Master's degree. The post-graduate

and doctoral studies are opened at research institutions, higher educational institutions of III and IV accreditation levels and equated to them post-graduate education institutions for the preparation of the scientific-pedagogical and scientific staff of a higher qualification (Cabinet of Ministers of Ukraine, 1999, No. 309).

In Ukraine, persons who have finished higher education with the educational qualification of a Master's level are admitted to the postgraduate study (with and without a break of employment) on a competitive basis (Verkhovna Rada of Ukraine, 2014, No. 1556-VII). A permanent specialized academic council of a higher educational institution or a research institution carries out a certification of persons who receive the degree of a Doctor of sciences on the basis of the public defense of the scientific achievements in the form of theses, published monograph, or a collection of articles published in peer-reviewed professional journals (Ministry of Education and Science, Youth and Sports of Ukraine, 2011, No. 1059).

The scientific community and the public have long criticized the demands of defense for formalism, secrecy and the lack of an effective mechanism for objectively evaluating scientific works of applicants for an academic degree, which led to a decrease of the quality of theses and the devaluation of the value of national academic degrees. As a result, two important innovations have been introduced at the state level, which are intended to eliminate such negative phenomena and restore the trust of the scientific community to the system of Ukrainian scholarly academic degrees.

First of all, if access to the full text of the theses was previously restricted to a very limited circle of individuals, and most interested scientist had the opportunity to get acquainted with the text of the theses only post factum, now, according to the Order of the Ministry of Education and Science of Ukraine on July 14, 2015, the specialized academic council, which has accepted a thesis, or the published monograph for defense, is obliged to place an electronic version of it, reviews of official opponents and synopses of the theses (*avtoreferat dysertaciji*) (in addition to theses containing state secrets or information for official use) on the official website of the institution in the open access (Ministry of Education and Science of Ukraine, 2015, No. 758). Also, the theses and reviews of official opponents should be made public on the site not later than 10 days before the date of a theses defense. These documents are kept openly accessible on the official website within 3 months from the date of issue of the diploma of the Doctor of Philosophy or Doctor of Sciences.

Another initiative is aimed at a more thorough check of Ukrainian professional journals in which applicants for a degree in Ukraine should publish the results of their research. Many titles of scientific journals are officially registered in the country, but most of them have a very limited readership, so they do not fulfill the function of informing the academic community about new important results of scientific research properly. Specialists of the Ministry of Education and Science of Ukraine regularly compile

and update the Lists of Scientific Professional Journals (Ministry of Education and Science of Ukraine, 2018a). As of December 2017, the Lists included 1638 Ukrainian scientific specialist journals (including 23 of social communications) and 96 electronic specialized journals (including 1 of social communications). However, the criteria for entering journal to the List were purely formal (such as, for example, the existence of a certificate of state registration, editions, information about the founder and academic degrees of the members of the editorial board, compliance with editorial requirements) and did not contain requirements for peer review of scientific articles published in the journal (Ministry of Education and Science, Youth and Sports of Ukraine, 2012b, No. 1111). While we were conducting the research, a new, more advanced Procedure for the formation of the List of scientific professional journals of Ukraine had entered into force (Ministry of Education and Science of Ukraine, 2018b, No. 32). But the practical results of its implementation can only be seen and evaluated in a few years.

Scientists are actively using auxiliary specialized tools for conducting on-line monitoring of important research results, in particular, thematic bibliographic indexes that exist in the form of online databases today. The most influential ones are the Science Citation Index Expanded (SCIE), the Social Sciences Citation Index (SSCI), and the Arts & Humanities Citation Index (AHCI), available on the Web of Science platform, owned by Clarivate Analytics, and the abstract and citation database Scopus, owned by Elsevier. In order to protect themselves from the inclusion of insignificant and non-scientific journals, the compilers of the authoritative abstract databases keep to transparent criteria for the selection of scientific journals, regularly monitor their quality, and annually suspend the indexing of dozens of journals due to violations by their editors of publishing and/or ethical standards.

Government officials and private sector representatives in many countries widely use quantitative and qualitative indicators, derived from the abstract databases and citation tracking tools, in combination with peer review, for the evaluation of research activities and the adoption of important managerial decisions. Ukrainian executives also began to use these scientometric tools. Thus, according to the new Order of the Ministry of Education and Science of Ukraine, an applicant for the academic rank of professor or associate professor must have publications in periodicals that are included in Scopus or Web of Science (Ministry of Education and Science of Ukraine, 2016, No. 13).

However, the mentioned Order of the Ministry of Education and Science is almost the only normative document in which the names of databases are clearly indicated. For example, the wording of the "scientometric bases recognized by the Ministry of Education and Science" appears in "The Procedure for Granting a Higher Education Institution a National Status, Confirmation or Deprivation of the Status" by the Cabinet of Ministers of Ukraine (2017, No. 912). And it is enough just to have "not less than one article in scientific periodicals of other states" for applicants to the PhD degree (Ministry of Education and Science, Youth and Sports of Ukraine, 2012a, No. 1112).

The legislative initiatives of the Ukrainian government were aimed at improving the presentation of the scientific achievements of Ukrainian scientists in the world. But, at the same time, Ukrainian officials tried to find compromise solutions that would not complicate the procedure of obtaining a PhD too much. However, the initiative did not take into account the fact that in the world, besides the respected quality scientific journals, there are a lot of pseudoscientific theses “predatory” journals, mostly masked as being open access journals that do not properly review manuscripts and are ready to publish any questionable material after receiving a publication fee from the authors (Xia et al., 2014). In addition, swindlers also offer editors the rapid inclusion of their journals into various dubious databases, where they will be given pseudo- and misleading metrics (Jalalian, 2015). And the inclusion of the journal in such dubious databases damages their reputation, since it can point to the incompetence of editorial staff in indexation issues, or to testify to a potentially predatory journal that, hiding behind indexing in various databases, seeks to delude of more trustful authors.

The Purpose of the Study and Research Questions

The aim of the study was to check whether the legislative initiatives of the Ministry of Education and Science of Ukraine stimulated LIS postgraduate students to submit articles in leading international journals and thus to contribute to the popularization of Ukrainian LIS studies among the international community. Or there was only an ethical dilemma before the applicants for the PhD degree in Ukraine: to try to publish in a high-quality peer-reviewed international journal or to quickly formally fulfill the requirement by publishing an article in a questionable journal with risk for own scientific reputation, because the current Ukrainian legislation does not prevent PhD students from publishing their works in predatory journals, or in journals that use fake metrics.

To achieve this, we have analyzed the lists of published articles of applicants of the PhD degree, which are contained in the synopses of their theses, which were exposed to open access according to the Order of the Ministry of Education and Science of Ukraine (2015, No. 758). For the study we have isolated from the general list of articles only those articles that were published in foreign (non-Ukrainian) journals.

The following research questions drive the study:

- 1) In foreign journals of which countries the Ukrainian LIS PhD students published their articles?
- 2) In which languages did Ukrainian LIS PhD students write their articles for foreign journals?
- 3) Did foreign journals in which Ukrainian LIS PhD students published their articles were indexed in international databases Scopus, Web of Science Core Collection, DOAJ?

- 4) Is the information about their indexation in “misleading metrics”¹ on the sites of these journals?
- 5) Is there any information about the peer review process on the sites of these journals?

Methodology

a) Data Collection

To collect data on PhD students’ articles published in foreign journals, the full texts of synopses of their theses were examined. The synopses of the theses are available on the official web pages of the three Ukrainian institutions that enable applicants to obtain a PhD degree in the field of library and information sciences: the Vernadsky National Library of Ukraine, the Kyiv National University of Culture and Arts, and the Kharkiv State Academy of Culture (Table 1).

According to Ukrainian legislation, after 3 months from the date of issue of the diploma of the Doctor of Philosophy or Doctor of Sciences, synopses together with other documents can be removed from the official website of the institution. We used the Wayback Machine (“Internet Archive”; n.d.) – the freely available digital library of Internet sites and other cultural artefacts in digital form, which contains copies of web pages at different times, for additional examine web pages to identify possible deleted documents.

b) Data Analysis

From the lists of published articles available in the synopses of the theses, we selected articles published in Non-Ukrainian journals. Using bibliographic information of the articles, we found the sites of the journals in which they were published.

In order to understand whether there are any obstacles (geographical or linguistic) to present the research results at the international level, we analyzed the countries of origin of the journals, and in which languages these articles were written.

We checked whether the journals indexed in the Scopus database and the Web of Science Core Collection databases (Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index and Emerging Sources Citation Index).

¹ Jeffrey Beall, a librarian from the University of Colorado (Denver, USA), compiled the “list of questionable companies that purport to provide valid scholarly metrics at the researcher, article, or journal level” which was accessible from his personal website. He suggested using a list of criteria for identifying questionable metrics, including the lack of information on the provider’s website about the company’s location and qualifications of its employees, the fee for including journals into the database, the annual growth of the indexes of most of the journals included in the database, the use of Google Scholar data for calculation of metrics, illegal use of the form “impact factor” in the names of metrics, the use of a fictitious, non-scientific, or non-original methodology for calculating metrics (Beall, 2016a). Beall decided to close his project in January 2017, but its copies are available on some web resources (Beall, 2016b).

We also checked whether open access journals from the list are in the Directory of Open Access Journals (DOAJ) that indexes high quality, open access, peer-reviewed journals ("Directory of Open Access Journals", 2018).

We also gathered information from official journals' websites about whether journals are indexed in the so-called "misleading metrics". This allows, to a certain extent, to clarify the editorial policy of the journals regarding their positioning in the academic realm. Usually, similar providers of questionable metrics are focused on their activities on making money on predatory journals that use fake metrics to attract as many authors as possible and thus increase their revenues. Accordingly, editorial boards of responsible scientific journals, which aim to distribute high-quality scientific information, on the contrary, should avoid "indexing" in such databases and not advertise misleading metrics on the web-sites of their journals.

At the same time, editorial boards of responsible journals should pay much attention to the process of reviewing the received manuscripts, so we also checked for a detailed description of the peer review process on websites of the non-Ukrainian journals.

Results

As of December 2017, on the official websites of the above-mentioned Ukrainian institutions 19 synopses of the theses of the PhD applicants in the field of library sciences, which were defended since October 2015 to December 2017, have been found. The lists of published articles of analyzed synopses of the theses contained 99 articles in Ukrainian periodicals and 22 articles in non-Ukrainian journals (Table 1).

Table 1. Number of the synopses of the Theses, the articles in Ukrainian and non-Ukrainian journals of Ukrainian LIS PhD students

Institution	URL	Number of the Synopses of the Theses	Number of the Articles in Ukrainian Journals	Number of the Articles in Non-Ukrainian Journals
Vernadsky National Library of Ukraine	http://nbuv.gov.ua/d2616501	10	57	10
Kyiv National University of Culture and Arts	http://knukim.edu.ua/spetsializovani-vcheni-radi/	2	12	3
Kharkiv State Academy of Culture	http://www.ic.kharkov.ua/ic_old_2016/Nauk_rob/Specrada.html	7	30	9

Some of the lists contained of published papers in non-periodic publications, usually in the proceedings of conferences. Since the mentioned Order of the Ministry (Ministry of Education and Science, Youth and Sports of Ukraine, 2012a, No. 1112) sets out the requirement for the publication in periodicals, academic papers published in ISBN publications were not taken into account in this study.

Ukrainian PhD students in the field of librarianship published articles in 19 foreign journals in general. One article was published in an undoubtedly fake journal, which at the time of the study has already stopped its questionable activity (and only its Web pages could be viewed using Wayback Machine). We have excluded the article and the journal from the data for below analysis.

The distribution of articles in non-Ukrainian journals per publisher countries indicates that Ukrainian PhD students in the field of library science favored the publishing of research results in the journals of neighboring countries of Ukraine. More than half of the papers were published in Russian journals (12 out of 21 articles) (Fig. 1).

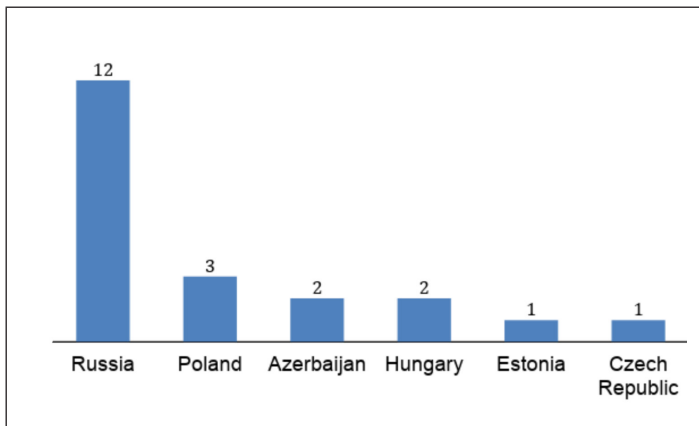


Figure 1. The numbers of the articles per country of Ukrainian LIS PhD students in non-Ukrainian journals

Most articles published by Ukrainian postgraduate students in foreign journals are written in Russian – 15 articles, 2 articles were written in Ukrainian and 2 – in English, one article was written in Polish (Fig. 2). The information about the language of 1 paper is unavailable.

None of the foreign journals in which Ukrainian PhD students in the field of library science published their work are included in the leading abstract databases Scopus or Web of Science Core Collection.

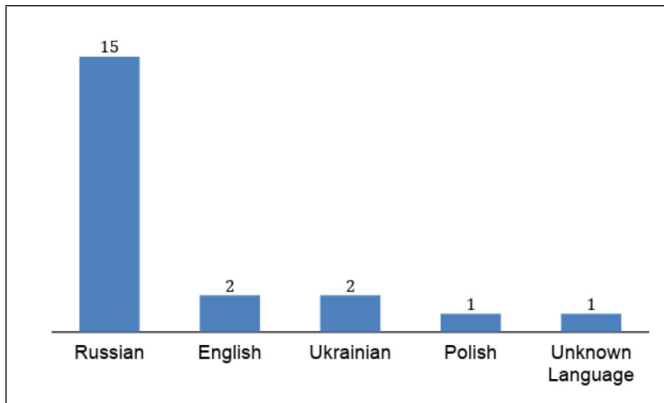


Figure 2. The language of the articles of Ukrainian LIS PhD students in non-Ukrainian journals

However, 6 of the 18 journals reported on their websites that they are indexed by databases that Jeffrey Beall attributed to “misleading metrics” (this may indicate that these journals belong to “predatory” ones): Directory of Research Journals Indexing, Eurasian Scientific Journal Index, Global Impact Factor, Index Copernicus, International Institute of Organized Research, International Scientific Indexing, Scientific Indexing Services, Scientific Journal Impact Factor (Table 2).

Table 2. Non-Ukrainian journals in which Ukrainian LIS PhD students published their articles

No	Source Title	ISSN	Publisher's Name	Publisher's Country	Open Access Status	Peer Review	Misleading Metrics
1.	Bibliotechnoe Delo	1727-4893	Agentstvo Inform-Planeta	Russian Federation	No	No	-
2.	Eureka: Social and Humanities	2504-5563	Scientific Route	Estonia	Yes	Yes	Eurasian Scientific Journal Index; Scientific Indexing Services; International Institute of Organized Research; Index Copernicus

Table 2 continued

3.	Humanities, Social-Economic and Social Sciences	2220-2404	ООО "Наука и Образование"	Russian Federation	Yes	Yes	Index Copernicus
4.	Kul'tura: Teorija i Praktika	-	Moscow State Art and Cultural University	Russian Federation	Yes	No	-
5.	Library Science and Information Modern Science:	2219-5882	Baku State University	Azerbaijan	Yes	No	-
6.	Actual Problems of Theory and Practice. Series "Humanities"	2223-2982	ООО "Nauchnye Tehnologii"	Russian Federation	Yes	Yes	-
7.	Paradigms of Knowledge	2336-2642	Vědecko Vydavatelské Centrum "Sociosféra-CZ"	Czech Republic	Yes	Yes	Global Impact Factor; Scientific Journal Impact Factor; Scientific Indexing Services
8.	Relga	1814-0149	relga.ru	Russian Federation	Yes	No	-
9.	Science and Education a New Dimension	2308-5258	Society for Cultural and Scientific Progress in Central and Eastern Europe	Hungary	Yes	Yes	Index Copernicus; Global Impact Factor; International Scientific Indexing; Directory of Research Journals Indexing Global Impact Factor
10.	Science and World	2308-4804	Publishing House "Scientific Survey"	Russian Federation	Yes	No	-
11.	Scientific and Technical Libraries	0130-9765	Russian National Public Library for Science and Technology	Russian Federation	Yes	Yes	-

Table 2 continued

12.	Scientific Dialogue	2225-756X	OOO "Centr Nauchnyh i Obrazovatel'nyh Proektov"	Russian Federation	Yes	Yes	Index Copernicus
13.	Scientific Proceedings of The Institute of Manuscripts of Azerbaijan National Academy of Sciences	2410-5619	Institute of Manuscripts of Azerbaijan National Academy of Sciences	Azerbaijan	Yes	No	-
14.	Social and Human Sciences	2391-4165	Foundation "Innovation"	Poland	Yes	Yes	-
15.	Spheres of Culture	2300-1062	Maria Curie-Skłodowska University	Poland	No	No	-
16.	V Mire Nauki i Iskusstva : Voprosy Filologii, Iskuststvedeniya i Kul'turologii	2309-3358	Associacija Nauchnyh Sotrudnikov "Sibirskaja Akademicheskaja Kniga"	Russian Federation	Yes	Yes	-
17.	Young Scientist	2072-0297	Izdatel'stvo "Molodoj Uchjonyj"	Russian Federation	Yes	Yes	-
18.	Zarządzanie Biblioteką = Library Management	2081-1004	University of Gdańsk	Poland	No	Yes	-

Most the analyzed journals support the Open Access initiative (15 journals) and provide readers with unobstructed access to full texts on its official websites. However, none of these journals is listed in the DOAJ.

There is no information about the peer review of the submitted manuscripts on the sites of 5 of 18 foreign journals, in which papers of the PhD candidates for the defense of their theses were published. Authors are required to supply reviews from peers for their own manuscripts by themselves in 2 journals.

Discussion

The exchange of professional information and the development of international scientific partnership is a necessary component of the efficient functioning of the

library network in Ukraine. And new reforms in the fields of education and science of Ukraine should have helped to solve a number of problems accumulated over the years in the Ukrainian library science. In particular, the introduction of the requirement for at least one article in a foreign scientific journal for the PhD applicants should have been helping to better present the achievements of Ukrainian librarians at the world level.

We analyzed the published articles of Ukrainian PhD students in the field of library science and concluded that given the language of publications, the narrow circle of publishing countries, the absence of the journals in leading abstract databases, the analyzed foreign journals ought to be attributed to regional editions with a small international readership audience.

Despite the fact that English is the lingua franca of modern science, only 2 articles of Ukrainian LIS PhD students were written in English. At the same time, most of the leading librarianship journals, including those covered in Scopus and the Web of Science Core Collection, publish articles in English. And the fact that the research results of Ukrainian PhD candidates, with a few exceptions, were presented in non-English may indicate that postgraduates immediately chose the "easier way" and decided to publish their papers in little-known journals, but did not make this choice after receiving several rejections from editors and reviewers of leading international editions of the field.

One-third of foreign journals, in which Ukrainian PhD students in the field of library science published their papers, do not report anything about manuscripts peer reviewing practice and/or boast by indicators of "misleading metrics" on their websites. The choice of such questionable journals for publications by Ukrainian postgraduates is typical for all the three investigated institutions.

The Ukrainian library community needs not to wait for new legislative initiatives that will hardly be able to anticipate all possible abuses by PhD candidates but to react decisively to violations of scientific ethics, including publication in predatory journals, or in publications that advertise the false metrics on their websites. Indeed, publications in dubious journals affect the development of scientific research in the field of library science in Ukraine, as they exclude the possibility of professional review (and therefore may contain conscious and unconscious mistakes, plagiarism, non-scientific data that foul the information space of the realm) and access to them by the international community through authoritative sources of information (that leads to the loss of valuable research results). At the same time, such facts systematically destroy the prestige and credibility of the profession in general, generating a lack of trust in the competence of Ukrainian librarians to be skillful information managers, intermediaries between information producers and consumers. Such practices are in contradiction with the current popular tendencies of librarians' promotion of information literacy and academic integrity.

Our study had two main limitations. The legislative stimulation of the growth of publishing activity of Ukrainian postgraduate students in the leading international journals did not work in Ukrainian library science. But in order to find out how this initiative works in other scientific fields, additional research should be conducted.

The publication of an article in the top scientific journal is the final stage in scientific research, which is preceded by many stages that cannot be jumped even under pressure from the requirements of the law. Access to world's full-text information resources, participation in international librarianship conferences, participation in major international scientific projects are among the factors that should stimulate Ukrainian post-graduate LIS PhD students to publish articles in leading professional journals, but these issues are still pending for their future decision-making in plans for reforming the system of science and education of Ukraine.

Conclusion

The findings presented in this study have important implications for Ukrainian library science development. Our analysis reveals that Ukrainian PhD students in the field of library science published the results of their research mainly in the Ukrainian regional journals and journals of the neighboring countries. With that, it was mostly non-English publications in obscure journals that are not represented in the leading abstracts and citation databases. So, our findings, the example of publication behavior of LIS PhD Students, confirms the results of previous studies (Haigh, 2009), which claimed that the Ukrainian library science has not yet formed a strong research culture and is poorly integrated into the global scientific community.

Accordingly, the legislative initiatives of the Ministry of Education and Science of Ukraine to improve the presentation of the results of postgraduate studies did not work in the field of library science, therefore Ukrainian legislation should be changed taking into account the current models of publishing behavior of postgraduate students in the direction of strengthening requirements and developing incentives for publication of articles in authoritative international journals, those that are indexed in Scopus or WoS, and increase responsibility for publishing results in "predatory journals".

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