

Analysis of the Georgian Science Journals for Being Indexed in International Databases

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We aimed to study bibliographies of the science journals of Georgia, reflecting their readiness to be included into the international academic publication databases. 149 active science journals registered in the ISSN National Centre of Georgia and certified by the ISSN International Centre have been reviewed. Information about a journal is taken from the journal's official website, verified and confirmed by the publisher. 66% of Georgian science journals are found to have a print ISSN (p-ISSN), 14% have an electronic ISSN (e-ISSN), and 20% have both. 76% of publications are mono-disciplinary and 24% are multidisciplinary. Over a third of science journals highlight natural sciences. Most numerous publications deal with such disciplines as economics, law and medicine. Relevance with the inclusion criteria of international science databases has been studied. The criteria include: peer review policy, publication frequency, journal's independent website, international editorial board, assignment of a digital object identifier (DOI), status of indexation in scholarly databases, etc. The study results evidence that significant number of science journals fail to meet the requirements of the international science databases. © 2021 Bull. Georg. Natl. Acad. Sci.

Periodicals monitoring, indexation

Today, 149 science journals are considered as active publications, the remit of which includes: Natural Sciences, Engineering and Technology, Medical and Health Sciences, Agricultural Sciences, Social Sciences (according to the OECD Frascati Classification of Science and Technology (FOS) [1].

66% of Georgian science journals are found to have a print ISSN (p-ISSN, 14 % – an electronic ISSN (e-ISSN), and 20 % – both. In addition, a part of online journals lacks the E ISSN, while the

journal's print version is frequently presented in the international network in the PDF format.

76% of publications are mono-disciplinary/subject-specific, 24 % – multidisciplinary (mostly scholarly papers, annual reports of research and educational institutions). The breakdown of journals by fields of science is given in Figure.

According to SCImago Journal & Country Rank, Georgia ranked the 81st by the number of documents published in 2019 (2198 documents) among 231 countries [2].

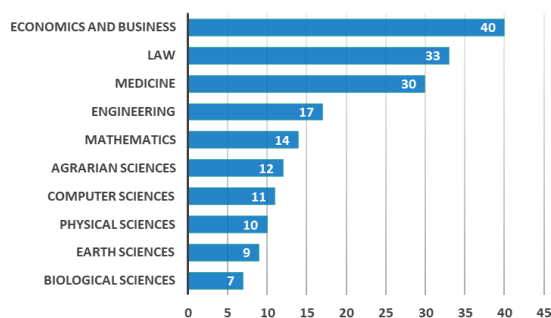


Fig. Number of Georgian journals according to the fields of science.

A significant part of Georgian science publishes the conducted research results in different foreign top-rated journals and gets indexed in science databases of different category, which adversely affects the quality indicators of local science journals.

Monitoring Format

As known, the general or subject-specific science indexation databases [3] have established definite conditions, with which a science journal or an individual publication should comply. Some databases have relative strict inclusion conditions. Irrespective of a diversity of these conditions, all the science databases share necessary general bibliographies to be complied with, such as: an International Standard Serial Number (ISSN) and an independent website, publishing regularity, international editorial board, article submission guidelines, etc. [4-6].

The monitoring of Georgian science periodicals aimed to study exactly these bibliographies implemented in the following format:

- Name of the publication according to the original;
- ISSN, E ISSN;
- URL;
- Subject area;
- Type (international, science, popular science);
- Publisher (university, association, private person, etc.);
- Publication year;

- Publishing regularity (number per annum);
- Editorial board (local, international, quantitative relation)
- Editor-in-chief (full name, status);
- Indexing body;
- DOI - Digital Object Identifier;
- Journal's history/archives (years);
- Current issue of the journal;
- Contact details (telephone, e-mail).
- Information about the journal taken from the journal's official website, verified and confirmed by the publisher.

In studying the said data, the science level of the publications remains unvalued without involvement of experts from different spheres; however, the conducted monitoring makes it possible to evaluate some important indexing criteria of international science databases, in particular:

- The journal must be peer-reviewed;
- The editorial board must be of international membership;
- The journal must be regularly published during the last two years;
- The journal's publishing schedule/frequency must be complied with;
- The content of publications must be readable and accessible for the reader;
- The journal must have an English-language site;
- The journal must be indexed in any international database;
- The journal must have DOI;
- The journal must have subject area.

Monitoring Results

Below are the monitoring results as of the late 2020. The fact that a journal is peer-reviewed is announced by 61 editions, or 41% of the total number of journals. Some mention single-blind peer-reviews and double-blind peer reviews, although the peer-review process is seldom described. Neither the number of peer-reviewed articles in the journal is mentioned.

Language of articles. Almost half of the journals – 47% (70 titles) are published in the Georgian-English languages. In such case, the article's text is in the Georgian language, while its abstract, key words and information about the authors are in English. Sometimes, an article is presented in the Georgian and the English languages, references also being bilingual.

Twenty-eight percent of the journals (42 titles) are trilingual – Georgian, English, Russian. These publications have diverse makeup versions; sometimes translated are the article titles and abstracts; sometimes mixed are articles written in different languages, etc.

Twenty percent (30 titles) of the journals are published in the English language only. In some cases, English-language articles have an abstract or annotation in the Georgian language.

Four percent (6 titles) of the journals are Georgian-language. They are ascribed to scientific-guidance or scientific-cognitive publications. Their editorial boards are local; some of them represent a Georgian-language version of the foreign-language edition (e.g., “Legal Methods”, “Therapia Georgia”).

Almost in all the cases the main content of the article is given as an English-language abstract or annotation.

Relevance with the journal's established publishing schedule is of great importance. Failure to comply with this requirement is indicative of vulnerable publishing policy and of the absence of a portfolio of suitable for publication manuscripts.

Thirty-two percent (47 titles) of the Georgian science journals are published once a year, 35% (52) – twice a year, 5% (8) – three-times a year, and 23% (34) – four-times a year; only 3% (5) are published on a monthly basis; 2% (3) – with different frequency.

For the sake of comparison it should be mentioned that 66% of science journals of the leading countries (USA, UK, Japan) are published four-times a year; 29% of the WOS impacts factor

journals – four-times, 20% – six-times, and 16% – twelve-times. In our case, the lesser frequency is observable, which significantly reduces the number of articles published in the Georgian scientific journals.

In 2020, only 97 titles (65.5%) of the science journals were published, which evidenced that the established publishing schedule was not complied with. The current issue of 29 journals (19.5%) was published in 2019, of 10 journals (6.8%) – in 2018. The emergency situation caused in 2020; on the country by the Covid-19 pandemic should be taken into account. Nevertheless, it can be convincingly said that only a small number of science journals is published with the established schedule in the country.

The average number of Editorial boards makes 25 (min. 2, max. 78); at that, in 18.7% the number of members is up to 10, in 24.6% – 11-20, in 22.4% – 21-30, and more in 34.3% – 30+.

In many cases, the editorial board page with names and titles is not properly completed.

In 78% of journals (117 names) the editorial boards are geographically diverse/international, although the mechanism of participation of foreign members in the process of the editorial board's work is unknown. The number of foreign specialists in the editorial board varies within 6-95%; in approximately 55%, their membership exceeds 30%. 16% of journals do not have a representative of a foreign country in the editorial board membership; 6% of journals are published without the editorial board.

The journal must have own website (own dedicated URL and homepage) that is accessible from any location. Without it the international science databases will not accept a journal for getting indexed.

Credible international databases require that the journal website include definite data [7], such as:

- Aims and scope
- Editorial board
- Instructions for authors

- The quality control system
- Open access policy
- Plagiarism policy
- Licensing terms
- Copyright terms
- Author charges
- Contact details – e-mail, publisher’s legal address.

Only 31% (47 titles) of the Georgian science journals have own website. Consumer access to the rest of journals is complicated, because they are placed on the website of the publisher, National Parliamentary Library or of any other organization. Accordingly, the content, information about the editorial board membership, the current and deposited publications, the editor-in-chief, the authors, etc. are accessible only after a definite search.

It should be mentioned that almost all the journals have an English-language website, including the journal scope and aims, the editorial board membership, minimum publication history length, instructions for authors; however, all the requirement components are in need of proper completion and clearly require further efforts.

Sources of finance. As known, the science journal, as well as its website, should indicate its business model and sources of finance, such as subscription revenue, author fee, royalty, advertising revenue, institutional and organizational support, etc.

Georgian science journals do not generally publicize their business model and sources of finance.

DOI – Digital Object Identifier – a mandatory element of a modern science publication. Its use significantly facilitates the information exchange process, raises the journal’s prestige, and evidences the high tech level of the edition.

As known, DOIs may be assigned to journal titles, volumes, issues, and (of course) journal articles as well as to books, preprints, theses, databases, etc. The International DOI Foundation (IDF) urges publishers of science journals [8] to

create a permanent ID, which, when appended to <http://dx.doi.org/> in the address bar of an Internet browser, will lead to the source/journal’s website, where comprehensive information about the journal can be found.

Only 14 Georgian science journals have been assigned a journal-title-level DOI. It can be that the DOI number is registered, but not fixed in the journal. Although the link is not changed, it is desirable that it should be indicated together with ISSN in all the journal issues. The location of the DOI can depend on many things, but there are some places to look for and find the DOI [9].

Indexation of a science journal implies its reflection (listing) in the science database (Latin index – listing, list). The indexation of a journal indicates its quality. Indexed journals are considered to be of higher science quality as compared to non-indexed journals.

A journal indexed in a science database enjoys better visibility and accessibility for the database user. The higher the number of journal-indexing databases, the more increased the journal’s readership. Accessibility in turn improves the journal’s credibility as of a reliable source of information in the given sphere of science.

About 28% (41) of Georgian science journals are not indexed in any database. The same number (41) is indexed only in the local database of Georgian science publications, generated at the Institute TECHINFORMI of the Georgian Technical University [10]. 44% of the journals are indexed in one or several international indexing databases, such as general and scholarly search engines academic research systems, bibliographic databases, open access journals databases, discipline-specific databases. Given below are the databases, where comparatively more Georgian scientific journals are indexed.

Such are the studied bibliographies of the Georgian science journals and the actual state of their compliance with the criteria for getting added to international indexing databases.

Table 1. Number of Georgian Science Journals in International Databases

#	Database	Number
1.	AGRIS	14
2.	Google Scholar	12
3.	EBSCO	12
4.	VINITI	11
5.	eLibrary.ru	10
6.	ISI – International Science Indexing	8
7.	OAJI - Open Academic Journals Index	7
8.	SIS - Science Indexing Services	7
9.	Academic Resource Index	7
10.	ICI - Index Copernicus International	6
11.	Scopus	6
12.	zbMATH	5
13.	ESCI (WoS)	4
14.	DOAJ - Directory of Open Access Journals	3

Table 2. Most Indexed Georgian Science Journals

#	Journal	ISSN	Number of indexes
1.	Georgian Mathematical Journal	ISSN 1072-947X E ISSN 1572-9176	36
2.	The Caucasus-Economic and Social Analysis Journal of Southern Caucasus (SCARSC)	ISSN 2298-0946 E ISSN 1987-6114	21
3.	Journal of Education in Black Sea Region (JEBS)	ISSN 2346-8246 E ISSN 2449-2426	19
4.	Law and the World	ISSN 2346-7916 E ISSN 2587-5043	11
5.	Innovative Economics and Management	ISSN 2449-2418 E ISSN 2449-2604	10
6.	GULUSTAN-BSSJAR (Black Sea Science Journal of Academic Research)	ISSN 1987-6521 E ISSN 2346-7541	>10
7.	Transactions of A. Razmadze Mathematical Institute	ISSN 2346-8092	9
8.	Georgian Medical News (GMN)	ISSN 1512-0112	7
9.	Journal of Homotopy and Related Structures (JHRS)	ISSN 2193-8407 E ISSN 1512-2891	>7
10.	Tbilisi Mathematical Journal	E ISSN 1512-0139	7
11.	Globalization & Business	ISSN 2449-2396 E ISSN 2449-2612	7

The results of a research conducted to study Georgian science publications evidence that an essential part of the science journals fail to meet the inclusion criteria of international science databases.

Complete information about individual science journal can be looked for in the publication “Directory of Scientific-Periodicals of Georgia” [11].

მეცნიერება ინფორმაციის შესახებ

საქართველოს სამეცნიერო-პერიოდული გამოცემების ანალიზი საერთაშორისო ბაზებში ინდექსაციისათვის

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**საქართველოს ტექნიკური უნივერსიტეტის ინსტიტუტი ტექნიკური, თბილისი, საქართველო*

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სამუშაო მიზნად ისახავს საქართველოს სამეცნიერო-პერიოდული გამოცემების იმ ბიბლიოგრაფიული მონაცემების შესწავლას, რაც გარკვეულწილად ასახავს მათ მზაობას სამეცნიერო პუბლიკაციების საერთაშორისო მონაცემთა ბაზებში ჩასართავად. განხილულია 149 დასახელების აქტიური სამეცნიერო ჟურნალი, რომელთა ISSN რეგისტრირებულია საქართველოს ეროვნულ ცენტრში და დადასტურებულია ISSN საერთაშორისო ცენტრის მიერ. ინფორმაცია გამოცემის შესახებ აღებულია ჟურნალის ოფიციალური საიტიდან, გადამოწმებული და დადასტურებულია გამომცემლის მიერ. დადგენილია, რომ საქართველოს სამეცნიერო ჟურნალების 66%-ს აქვს ბეჭდური გამოცემის სერიული ნომერი, 14%-ს – ელექტრონული გამოცემის, ხოლო 20%-ს – ორმაგი ნომერი; გამოცემების 76% თემატურია, 24% – პოლითემატური; სამეცნიერო ჟურნალების მესამედზე მეტი აშუქებს საზუნებისმეტყველო მეცნიერებებს; ყველაზე მრავალრიცხოვანი გამოცემების თემატიკაა ეკონომიკა (40), სამართალი (33) და მედიცინა (30). შესწავლილ იქნა რამდენადაა დაცული საერთაშორისო სამეცნიერო ბაზებში ჩართვისათვის საჭირო კრიტერიუმები: პუბლიკაციების რეგენზირება, გამოცემის პერიოდულობა, ჟურნალის დამოუკიდებელი საიტი, რედკოლეგიების საერთაშორისო შემადგენლობა, ციფრული ობიექტის ინდექსის მინიჭება, სამეცნიერო ბაზებში ინდექსაციის მდგომარეობა და სხვ. კვლევის შედეგები ადასტურებს, რომ სამეცნიერო ჟურნალების მნიშვნელოვანი რაოდენობა ვერ აკმაყოფილებს საერთაშორისო სამეცნიერო ბაზებში ჩართვისათვის აუცილებელ მოთხოვნებს.

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