USE OF SCIENTIFIC PROFILES TO PRESENT THE RESULTS OF SCIENTIFIC RESEARCH OF UNIVERSITIES

Iryna Mihus[1]

[1]*Doctor of Science (Economics), professor, "KROK" University, Kyiv, Ukraine, e-mail: irynamihus@gmail.com, ORCID: https://orcid.org/0000-0001-6939-9097*

Abstract. *The article substantiates that the main problem of modern universities is the search for effective methods and tools to present the results of their activities in the Internet space in order to attract more applicants and, in turn, increase the position in the rankings. The study found that an equally important component of the vast majority of rankings are research results, which are calculated as the number of scientific articles published in journals indexed in Scopus / Web of Science, as well as the h-index. A study of the positions of Ukrainian universities in international rankings showed that, despite significant advances in science, they can not get into such rankings. The study found that one of the reasons for this situation is the low level of transparency of both the research conducted at universities and the results of such research. To solve this problem, it is proposed to use scientific profiles of university staff, which contribute to the dissemination of information about scientific achievements, as they contain general information about authors that can be used for grants, participation in conferences, peer review, international rankings and others. The aim of the article is to manage the information reflected in the scientific profiles of researchers to increase the position of universities in international rankings using the results of its comparison with the information used to compile these rankings. The research methodology includes methods of analysis and synthesis, induction and deduction, method of comparing results. It is established that the main scientific profiles that universities can use to publish research results are: Author ID in Scopus, ResearcherID, ORCID, Google Scholar. Thus, the study found that the international rankings of universities, in addition to the information posted on their websites, also use the information contained in the scientific profiles of employees of these institutions. The lack of completed profiles of scientists leads to a decrease in the position of universities in international and domestic rankings.*

Keywords: university, recearcher, scientific profile, transparency, publications, mechanism of information exchange, grants, competitiveness.

JEL Classification: A20, A29, I 23
Formulas: 0; fig.: 1; tabl.: 1; bibl.: 13

Introduction. In the current conditions of growing competition in the international market of educational services, more and more applicants when choosing a university pay attention to its position in international rankings. In most countries of the world, the position of universities in international rankings is the basis for providing public funds to finance activities and research, as well as receiving international grants.

Unfortunately, most Ukrainian universities carry out inefficient management of the results of scientific publications of all scientific and pedagogical workers, which slows down their positioning in international rankings, which, in turn, leads to reduced competitiveness of educational institutions in the world educational space.

I believe that the solution to this problem for modern universities is to find effective methods and tools to present the results of their activities on the Internet to attract more applicants and, in turn, increase the position in the rankings.

Aims. The aim of the article is to manage the information reflected in the scientific profiles of researchers to increase the position of universities in international rankings using the results of its comparison with the information used to compile these rankings.

Methods. The research methodology includes: methods of analysis and synthesis, induction and deduction, method of comparing results.

Results. We believe that the solution to this problem of modern universities is to find effective methods and tools to present the results of their activities in the Internet space to attract more entrants and, in turn, increase positions in the rankings [1].

According to the results of the study presented in table. 6, it was found that no less important component of the vast majority of rankings are the results of scientific activities, which are calculated as the number of scientific articles published in journals indexed in Scopus / Web of Science, as well as their citation index [2].

A study of the positions of Ukrainian universities in international rankings showed that, despite significant advances in science, most of them can not get into such rankings, and those that did - occupy a fairly low position.

It is clear that the main problem facing most universities is limited funding, but an equally important reason is the low level of transparency of both the research conducted at universities and their results.

We believe that to solve this problem it is necessary to use scientific profiles of university staff, which contribute to the dissemination of information about scientific achievements, as they contain general information about authors that can be used for grants, participation in conferences, peer review, international rankings, etc..

It is established that the main scientific profiles that universities can use to publish research results are: Scopus Author ID, ResearcherID, ORCID, Google Scholar.

Scopus AuthorID. Scopus is one of the world's largest scientometric databases, which allows you to track citations of articles that have been published in scientific journals. It is owned by Elsevier Publishing Corporation. Scopus indexes about 24,000 scientific journals from various fields of science, conference proceedings, book editions, almost 80% of which contain annotations.

Examining the features of filling and using Scopus AuthorID found that it is created automatically when there are publications in publications indexed in Scopus. This profile contains information with the author's name, place of work (affiliation), number of publications, years of publication, field of research, co-authors, the total number of citations of the author's works, the author's worst index, etc. [3].

It is possible to subscribe to a certain Scopus Author ID and track the publication activity of the scientist. Because the information is generated automatically, a scientist may have two profiles in Scopus. That is why the profile needs to be adjusted in case of change of the author's surname or its different transliteration, his place of work, or country of residence. Without appropriate adjustments, the university's indicators, which are taken into account in international rankings, will be much lower.

Researcher ID. Web of Science (WoS) is a search platform that combines abstract databases of publications in scientific periodicals and is subordinated to Clarivate Analytics. WoS presents information from all fields of knowledge, indexing more than 12,000 journals, 120,000 different scientific conference proceedings. The vast majority of tasks to assess the effectiveness of scientific research in the world are solved on the basis of WoS data.

Scientific profile in ResearcherID (now - Publons), in contrast to Scopus AuthorID allows you to manage the publications of authors, improve the ranking of their profiles by posting information about participation in the review of publications of other authors. The peculiarity of this profile is that registration in it is available to everyone, does not require a subscription to the Web of Science or the availability of publications indexed in this database.

In addition, ResearcherID allows you to:

- create a profile of a scientist (with a combination of different spellings of the surname in Latin);

- to form a list of own publications as a whole and in the context of individual journals;

- determine their own scientometric indicators (Worse index, number of articles, number of citations of their publications indexed in the Web of Science);

- synchronize your profile with the profile in ORCID;

- to search for scientists (groups) on the topic of research and create invitations to cooperation.

The disadvantage of this profile is that Web Science automatically adds articles to the profile of the researcher, which requires you to do it yourself. Although, on the other hand, it allows to control the filling of the profile by the author and to ensure that the citation indicators created in the profile of the researcher cover all his work without omission.

ORCID. We believe that the scientific profile of ORCID is currently the most complete open source of information about the achievements of scientists, as it contains bibliographic data about the author, such as: information about education, jobs, participation in research projects and grants, publishing activity. The advantage of ORCID is the ability to fill it by importing information from other databases (Crossref Metadata Search, Research Data Australia, ResearcherID, Scopus - Elsevier, etc.), as well as further export to other profiles of the author, including ResearcherID (Publons) [6].

We believe that the main advantages of ORCID for scientists are:

- eliminates the ambiguity of the author's name by combining different spellings of the surname in Latin;

- makes it easier for reviewers to find researchers working on a particular topic;

- promotes cooperation with other researchers;

- confirms the experience of participation in research projects to attract grants;

- used by publishers to submit manuscripts and synchronize articles with profiles of authors;

- used by professional associations for membership purposes;

- interacts with other author profiles on different platforms and systems (for example, Scopus Author ID and ResearcherID).

ORCID is a universal and unique identifier that remains with the author throughout his career, regardless of affiliation with the organization.

It should also be borne in mind that information about scientific publications contained in the ORCID scientific profile is automatically displayed in the ResearchID. However, unfortunately, other information (biography, education, place of work, etc.) must be filled in separately. The information in the Scopus Author ID can also be synchronized with ORCID, which will display articles published in journals indexed in SCOPUS, which will help clarify the affiliation of the researcher.

Google Scholar. The Google Scholar profile is part of the Google search engine [5], which indexes the full text of scientific publications of all formats and areas, allows authors to track citations of their own publications or citations of a particular author, track specific topics, see your Worst Ratio, and more. In Google Scholar, the author's publishing activity is the most widely represented, as it is automatically filled in from other open sources of information.

Google Scholar Citations automatically calculates three metrics: h-index, i10-index, and total citations, and plots the number of citations of the author's documents by year.

- citation statistics - the number of bibliographic references to all publications (the second column - for the last 5 years).

- h-index - the largest value of h, at which h publications have at least h bibliographic references (the second column - for the last 5 years) (Worse index).

- i10 index - the number of publications that have at least 10 bibliographic references (the second column - for the last 5 years).

Due to the fact that the profile in Google Scholar is updated on the basis of BibTeX, it can be filled by setting up an automatic link with ORCID, which will reduce the likelihood of erroneous inclusion of articles by other authors in the profile of the researcher.

Table 1 shows the basic information that is reflected in the scientific profiles of researchers, which allows us to conclude that there is some synchronization between them. Given the above mechanism of information exchange between scientific profiles of researchers, we present it in Fig. 1.
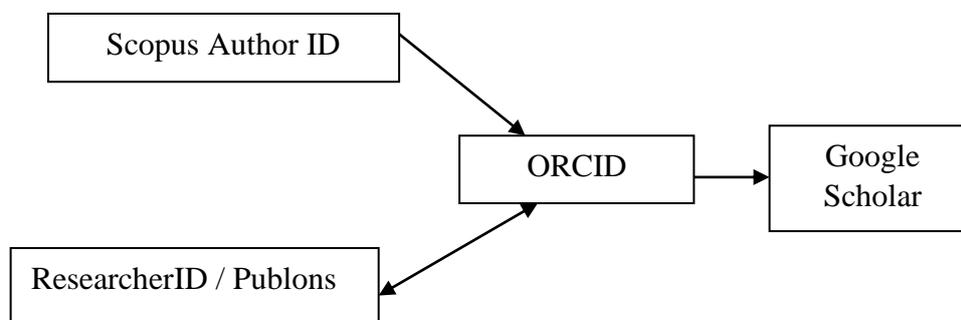

Figure 1. The mechanism of information exchange between scientific profiles of researchers

Source: developed by the author

Table 1. Comparison of information in scientific profiles of researchers

Information about the author	Scopus Author ID	ResearcherID / Publons	ORCID	Google Scholar
Different variants of the name and surname (including transliteration)	-	+	+	-
Country	+	+	+	+
Research interests	+	+	+	+
Links to other profiles	+	+	+	-
Autobiography	-	+	+	-
Education	-	-	+	-
Work experience, position	-	-	+	-
Affiliation	+	+	-	+
Part-time work, honors and awards	-	-	+	-
Membership in international organizations	-	-	+	-
Funding of research projects (grants) and awards (prizes)	-	-	+	-
List of publications	+	+	+	+
Citation	+	+	-	+
h-index	+	+	-	+
Systematization of publications by journals	-	+	-	-
Subscription to the work of other authors	+	+	-	+

Source: developed by the author

Thus, in Figure 1, the main scientific profile that generates most of the information about the researcher is ORCID, the information from which is imported into Google Scholar and ResearcherID / Publons. In this case, mutual information can be exchanged with ResearcherID / Publons, and Scopus Author ID can be combined with ORCID to identify the author of the article.

Comparing the information used by international rankings and the information provided by scientific profiles of researchers, the matrix "international rating-scientific profile" was developed, which will promote a more responsible attitude of both researchers and university management to fill scientific profiles and transparency in them (Table 2).

Table 2. Matrix "international rating-scientific profile"

	ARWU	QS	Scopus	THE	Webometrics	SCImago
Scopus Author ID	+	+	+	+	-	+
ResearcherID / Publons	+	+	-	+	-	-
ORCID	-	-	-	+	-	-
Google Scholar	+	+	-	+	+	-

Source: developed by the author

The developed matrix indicates a rather low level of use of ORCID in the calculation of international rankings, however, its role in the management of scientific profiles, their content and synchronization should not be underestimated.

I believe that the completeness of filling scientific profiles and their settings also depends on the international recognition of individual researchers and the university as a whole, as well as its positioning in international rankings.

Conclusions. All in all, the study found that the international rankings of universities, in addition to the information posted on their websites, also use the information contained in the scientific profiles of employees of these institutions. The lack of completed profiles of scientists leads to a decrease in the position of universities in international and domestic rankings.

Scientific profiles and identifiers initiated by publishers (Scopus, ResearcherID) allow journals to see all publications of authors, to contact them, to understand the level of citation of a particular author or individual article. Publishers send information about a particular author's publications to the ORCID database. These profiles are useful for universities, because they allow you to track information about research and teaching staff, to generate reports on research activities. For libraries, the cataloging process by authors is simplified. Grant organizations have the opportunity to see a list of publications by a particular author and the grants he has received. Scientific communities can see the publishing activity of their members or potential conference participants. In addition to scientific identifiers, it is possible to maintain scientific profiles.

References:

1. Mihus I., Cherevko O. Radzihovska U. (2016). Marketing approach to the improvement of interface security of institutions of higher education. *Zbirnyk naukovykh prats Cherkaskoho derzhavnoho tekhnolohichnoho universytetu. Seriia: Ekonomichni nauky*, 1 (43). doi: http://dx.doi.org/10.24025/2306-4420.1.43.2016.120077

2. *The official site of IREG Observatory on Academic Ranking and Excellence, Retrieved from: http://ireg-observatory.org.*

3. *The official site of Academic Ranking of World Universities, Retrieved from: http://www.shanghairanking.com.*

4. *The official site of the QS World University Rankings, Retrieved from: https://www.topuniversities.com/university-rankings.*

5. *The official site of the* Sci Verse Scopus. *Retrieved from:* https://www.elsevier.com/solutions/scopus.

6. *The official site of the Times Higher Education. Retrieved from:* https://www.timeshighereducation.com/world-university-rankings.

7. *The official site of the* Ranking Web of Universities. *Retrieved from:* http://www.webometrics.info/en.

8. *The official site of the* SCImago Institutions Rankings. *Retrieved from:* http://www.scimagoir.com/.

9. Hreben S., Mihus I., Parashchenko L., Laptiev S. and Alkema V. (2019), The mechanism of financial control over the allocation of budgetary funds depending on the results of scientific activity of a higher education institution. *Finansovo-kredytna diialnist: problemy teorii ta praktyky,* №4(31), pp. 466-476. DOI: http://dx.doi.org/10.18371/fcaptp.v4i31.190998.

10. *The official site of Scopus,* Retrieved from: http://www.scopus.com/.

11. *The official site of Web of Science,* Retrieved from https://publons.com/.

12. *The official site of ORCID,* Retrieved from: https://orcid.org/.

13. *The official site of Google Scholar,* Retrieved from: https://scholar.google.com.ua/.