International Journal of English Language Education
ISSN 2325-0887
2024, Vol. 12, No. 1

The advantages of Google Scholar Ranking

Marjan Bojadjiev, PhD

School of Business Economics and Management, University American College Skopje
Skopje, Republic of North Macedonia

Venera Krliu, PhD

School of Business Economics and Management, University American College Skopje
Skopje, Republic of North Macedonia

Sanja Pavlova, MSc (Corresponding author)

School of Business Economics and Management, University American College Skopje
Skopje, Republic of North Macedonia

Ivona Mileva, PhD

School of Business Economics and Management, University American College Skopje
Skopje, Republic of North Macedonia

Received: February 18, 2024 Accepted: March 6, 2024 Published: March 11, 2024

doi:10.5296/ijele.v12i1.21766 URL: https://doi.org/10.5296/ijele.v12i1.21766

Abstract

The ranking of universities in the world is a crucial link when it comes to the circular process called choosing the right university for each future student. During this selection process, students consider many factors. It is these rankings that help them make in-depth analysis of what different universities and professors have to offer. The purpose of this paper is to show the benefits of academic ranking of universities, faculties, professors, and researchers, as well as to get a clear picture of the degree of citation of the professors, specifically on the Google Scholar platform, while explaining the level of the faculties and universities. The criteria according to which the ranking is made is the total number of citations of professors and researchers from the universities and faculties.

Keywords: Google Scholar, rankings, professors, researchers, citations

1. Introduction- What is Google Scholar?

When it comes to job candidates, tenure, and promotion, faculty, administrators, and external reviewers use Google Scholar as a very important tool (Jensenius, et.al. 2018).

According to Falagas, et.al. (2008), all interested researchers and the public have open and free access to the Google Scholar platform.

When we need relevant and reliable information from any scientific field, Google Scholar helps us with that. This platform is a source of numerous disciplines, articles, books, theses, published by academic publishers, professional associations, as well as various websites. Through Google Scholar we get the opportunity to search scientific literature in a simple and fast way.

Google Scholar is the Google search engine specialized in academic documents. As Kousha & Thelwall (2007) point out, Google Scholar has a citation feature that is a new tool that contributes to the expansion of bibliometrics. It was created in 2004 and it is the one we should use if we are university students, or we are working on academic content. According to Walters (2007), Google Scholar's ability to offer access simply and quickly to a wealth of information from a variety of fields has undoubtedly been of interest to numerous researchers. In this search engine, only articles published in indexed journals, theses, books, patents, and documents related to scientific and academic congresses appear. It is therefore the largest source of information suitable to be included as a bibliography in any document whose sources must be academically valid.

Google Scholar is characterized by many data and such therefore, this academic search engine notes the size of the number of citations in contrast to the different ones. Anyone who has their own Google Scholar profile can get information about the redeemable number of citations of his/her publications by regularly cleaning it from here and managing accordingly with visitors of published papers and co-authors of those papers' profiles. Google Scholar records a serious level of accuracy of over 95%.

One of the main goals of Google Scholar is to make it freely available to anyone with an Internet connection, so globally, users are happy with its speed (Harzing, 2016).

When it comes to tools that should be part of every library, we undoubtedly come across Google Scholar, which represents a branded beta version that is becoming an indispensable part of data searches by researchers (Howland, et.al, 2009).

2. Theoretical Foundations

Citations are part of databases that must adhere to numerous bibliometric measures. This type of measure only supports published and cited data that are part of papers indexed specifically in that database. Bibliometric analyzes are composed of numerous bibliometric data.

Citation is a very interesting issue that is subject to numerous analyses, such as the development of a relationship between web pages and citation, as well as the impact factor of journals (Kousha & Thelwall, 2007).

The importance of citation stems from the fact that it shows the readers of the work that the problem being written about has been mastered and that respect and recognition are given to previous sources that deal with the same matter before we give our own point of view about it.

Different disciplines bring with them differences when it comes to the relevance and functionality of the implemented bibliometric measures. Also, a difference can be observed in the obtained results, as well as in their impact on research productivity.

Citation acknowledges the work that others have invested in research.

Through citations, we gain consistency of the topic we are working on and thus our research acquires authority and credibility. Appropriate citation should be based on the work of other researchers in order to facilitate the research process.

There are many reasons which are represented when talking about the importance of citing. Some of them are:

- Bigger credibility of the work
- Origin of information
- Enrichment of knowledge through existing sources
- Acknowledgment of other people's work

When citing, the basic elements of each source should be indicated:

- AUTHOR'S NAME- one person, many people, group or organization.
- PUBLICATION TITLE
- DATE OF PUBLICATION

In case a publication is part of a larger work, then it is necessary to state the name of the larger work.

Authors have the opportunity to keep up to date by tracking the number of citations of their papers. There is an option on Google Scholar that allows the review of citations of publications, as well as the calculation of the number of citations for a certain time interval.

Google Scholar contains information that is part of scientific journals and from US patents that are part of Google Patents. That information is made available for reference. Each publication that is cited contains an option that can be clicked on in order to get a real picture of the cited sections and patents from the journal.

Only relevant scientific publications are indexed on Google Scholar, and for that reason only citations from these publications are taken into account in the calculations for the total number of citations.

Through Google Scholar, access is gained to almost all academic sources that are conceptualized in appropriate frameworks permitted to be published on the Internet (Ahmed, 2012).

We can come across quotes from a variety of sources, including Power Point presentations, Word documents. For this purpose, all sources are equally ranked.

Sometimes it can happen that certain authors have names that are difficult to search, and this fact can contribute to unpredictable situations when finding results. The academic search engine Google Scholar itself recommends its users to use the author's last name when searching in combination with the main title of the publication.

3. The aim of Google Scholar Ranking

For the past 10 years, there has been a debate in the academic area about the use of Google Scholar as a scientific assessment tool (Orduña-Malea, et.al, 2015).

Comparative to this, Delgado López-Cózar (2013), points out that, today Google Scholar is, as a source of scientific information, a serious alternative to traditional databases and it is argued that the bibliometric products derived from it, and specifically, journal rankings (Google Scholar Metrics) offer results as solvent, reliable and valid as those offered by JCR (Journal Citation Reports) or SJR (Scimago Journal Rank).

Beel and Gipp (2009) state that, thanks to the rapid progress of science, the need for platforms that represent academic search engines is increasing, and as for authors and researchers, they strive to have their papers and works ranked well on such search engines in order to reach their audience.

There are almost no academic search platforms that can combine several ranking approaches into one algorithm, while Google Scholar is one of the few that has this capability (Beel & Gipp, 2009).

As Craig (2021) explains, in the case that the subject of ranking refers to the same aspects, it is very likely that the methods used are different.

The fundamental difference with the Google search engine is that with Google Scholar the results are ordered by relevance and a ranking tool is used that considers the full text of each one of the articles. In addition, the results include technical books, as well as a link to other articles that cite the indicated article.

The way Google Scholar ranks documents is by measuring the text of the documents, the place of publication, the author, and how often and when it was last cited in other scientific literature (Rovira et. al., 2019).

Google Scholar also allows users to search for digital or physical copies of articles, either online or in libraries. It is as easy to use as traditional Google web search. To get more out of the tool, we can use advanced search, with which it is possible to automatically filter the search results to show only those belonging to a specific publication or article. Most of the content is donated by the creators themselves and, in fact, publishers from all over the world index their works in different disciplines to make them available to users. Now, Google Scholar is the best free tool for locating academic information.

4. The Bright Sights of Google Scholar

As Shultz (2007) points out, the Google brand, which is part of the name of Google Scholar, is one of the biggest advantages in addition to the simplicity and speed of its application.
On the other hand, Henderson (2005), emphasizes that the progress and rapid growth of technology, as well as the high performance of the Internet, are confirmed by the launch of the academic search engine Scholar by Google.

Google Scholar combines numerous components with its search engine capabilities. In this way, authors can create profiles with a variety of privacy settings like social networks. This feature allows the reach of individual papers to be extended through Google Scholar and beyond traditional media.

Google Scholar has many advantages that divide it from the other research platforms.

There are situations where one source can be available in multiple versions and this is one of the main advantages for users when it comes to using Google Scholar (Moed, et.al, 2016).

It is a free service, simple to create and maintain. It facilitates the monitoring control of bibliographic citations that a scientific paper receives, allowing checking who cites the publications, creating graphs and calculating various types of statistics on them. Additionally, it helps to know the research areas with the greatest impact. It allows users to create a personal library of bibliographical references. Google Scholar helps schedule bibliographic alerts for news on topics and authors of our interest. Without a doubt, it is a tool that will allow us to maximize the visibility of our research and strengthen our reputation and digital identity.

Table 1. Strengths of Google Scholar

Fast and simple application	Google Scholar offers numerous credible academic sources. The search process is quite similar to Google.
There is an option to see who made the quotes	Every source available on Google Scholar has references available. With just one click, you can find out how many times a certain publication has been cited and by whom.
Access to patents and legal documents	Google Scholar features patents and legal documents. If searching for legal documents, it is possible to search by state and court through the legal documents option under the main Google Scholar search box.

Source: Adjusted according to
https://libguides.merrimack.edu/GoogleScholar/StrengthsWeaknesses

Google Scholar is special for its highly developed performance. It has the ability to evaluate and rank literature through the capacity to see who is using and citing available sources, while automatically analyzing all citations in order to avoid bias from potential analysis performed by human resources (Noruzi, 2005). According to Bakkalbasi et al. (2006), Google Scholar citations are unique academic materials.

In comparison to this, Dewan (2012), claims that Google Scholar enriches its base of academic sources several times in a week.

According to Chen, et.al (2013), if a comparison of standard academic search engines is made with Google Scholar, one of the many aspects that differ is the wide coverage of institutional information they offer, as well as easy and free access to them. The main point of this ranking is to formulate a precise picture of the key literature in a particular field through the total number of citations (Chen, et.al, 2013).

5. Is Google Scholar a Relevant Source?

Over time, Google Scholar's performance increases. The benefit of Google Scholar lies in the fact that it offers a wide range of credible journal articles and offers information that we would not be able to find elsewhere. Google Scholar consists exclusively of reliable sources, academic papers, journal articles, but also offers access to books published on Google.

5.1 References in other Languages

Google Scholar also offers a large selection of non-English academic literature, which is a significant advantage over other academic search engines. As an indication of this, it is important to note that Google Scholar has expanded to other language areas through the launch of Estadisticas (Google Scholar Metrics/GSM) in Spanish, specifically in 2012 (Cabezas-Clavijo & Delgado-Lopez-Cozar, 2013).

Important to emphasize, when it comes to the relevance of Google Scholar, is the fact that here there is an opportunity to search how many times a source has been cited. Such performance is characteristic only of highly developed and relevant databases.

This entire process is very important, as it provides a quality ranking by measuring the total number of citations, and this helps the highest quality and most influential academic papers rise to the top and be read by the largest possible audience.

The possibility of simple and free access to information from different fields at once through Google Scholar reflects interdisciplinarity.

Recently, it is common for libraries to decide to provide online access to their bibliography, precisely through Google Scholar (Asher et.al, 2013).

As Dewan (2013) points out, Google Scholar can lay the foundation for all our academic achievements.

In the world of rapid advancement of academic achievements, we have witnessed numerous researches and analyzes that researchers do, which are closely related to the implementation of Google Scholar, while they constantly confirm that Google Scholar can be used as a reliable source of literature in various fields (Halevi, et.al, 2017).

Jacso (2005) states that, a classic example of the high relevance and reliability of Google Scholar is the fact that researchers and scientists tasked with finding technological solutions to the Indian Ocean disaster and tsunami warning systems will search for available information from the wide range of scientific literature that offered by Google Scholar.

6. Method

In this paper we are using information from secondary quantitative research done by other researchers in terms of Google Scholar and its relevance. The purpose is to explore the level of the Google Scholar citations and their impact on the academic field.

7. Discussion

Table 2. Display of the highest citation in Google Scholar

Rank	Name	Organization	H Index	Citations
1	Ronald C. Kesser	Harvard University	316	466308
2	JoAnn E. Manson	Brigham and Women's Hospital; Harvard Medical School	300	383680
3	Robert Langer	Massachusetts Institute of Technology MIT	297	359953
4	Graham Colditz	Washington University in Saint Louis	295	349617
5	Shizuo Akira	Osaka University	291	409348
7	Frank B. Hu	Harvard University	285	400594
8	Michael Graetzel	Ecole Polytechnique Federale de Lausanne	283	419520
9	Bert Vogelstein	Johns Hopkins University	277	459791
10	Zhong Lin Wang	Georgia Institute of Technology	273	319505

Source: https://www.webometrics.info/en/hlargerthan100

In addition to the big three rankings QS, ARWU and TIMES HIGHER EDUCATION (Bojadjiev, et.al, 2023), Google Scholar is also based on other sources such as Webometrics.

According to research done by Webometrics during the second week of March 2022, the highest citation score (h>100) with h= 316 or 466308 citations in Google Scholar, has Ronald C Kessler from Harvard University, based on his Google Scholar Citations public profile.

Table 3. Classification of Google Scholar citations by type of document

	Mostafa (n=247)		**Nisonger (n=111)**	
	Count	%	Count	%
Journal Articles	87	35.2	82	73.9
Conference Papers	83	33.6	7	6.3
Research Reports	31	12.6	8	7.2
Dissertations and Theses	11	4.5	4	3.6

Dead Links	6	2.4	1	0.9
Editorial Materials	6	2.4		
Workshops	5	2.0		
No access	4	1.6		
Technical Reports	3	1.2		
Websites	3	1.2	1	0.9
Others (chapters, bibliographies)	8	3.2	8	7.2
Total	247	100.0	111	100.0

Source: Yang & Meho (2007)

As Yang & Meho (2007) elaborated in their research, in the displayed table 3, we can see that Mostafa has a total of 247 citations, of which 87 (35.2%) were published in journal articles. On the other hand, Nisonger has a total of 111 citations, of which 82 (73.9%) were in journal articles. According to these indicators, we can summarize that Google Scholar mostly offers citations from sources that are published in scientific journals.

Table 4. Degree of academic achievement based on exclusivity

Participant	**Found Only in Database Average Score**	**Found Only in GS Average Score**	**Percent Change in Scholarliness Score Between the Database and GS**	**Found in Both Average Score**
1	11.7	16.1	36.8%	13.5
2	13.2	13.8	4.5%	14.6
3	N/A	12.0	N/A	15.6
4	10.0	13.5	35.0%	14.3
5	10.0	11.6	16.0%	11.5
6	11.7	12.8	8.5%	14.3
7	16.5	14.4	-12.7%	13.9
Least Squares Mean	11.9	14.0	17.6%	14.2

Source: Howland, et.al, 2009

According to the research of Howland et.al, (2009), table number 4 shows that Google Scholar's citations are on average higher rated than the citations of other databases, or rather the difference is 17.6% higher.

8. Conclusion

We can conclude that with the advancement of technology, the academic search engine Google Scholar has become a highly relevant tool when it comes to scientific research.

Since its birth in 2004, Google Scholar, until today, has undergone numerous transformations, to currently be considered the largest bibliographic database in the world.

Hence, exploiting the information stored in Google Scholar presents a huge challenge.

The idea of ranking universities and professors based on the total number of citations on Google Scholar is quite intriguing in the direction of laying new foundations when it comes to the process of selection and determining the quality of higher education.

References

Ahmed, K.K.M. (2012). Assessing citations with Google Scholar: A new feature. *J Pharmacol Pharmacother,* 3(1), 75–76. https://doi.org/10.4103/0976-500X.92502

Asher, A. D., Duke, L. M., and Wilson, S. (2013). Paths of discovery: Comparing the search effectiveness of EBSCO Discovery Service, Summon, Google Scholar, and conventional library resources. *College & Research Libraries*, 74(5), 464-488. https://doi.org/10.5860/crl-374

Bakkalbasi, N., Bauer, K., Glover, J. and Wang, L. (2006). Three options for citation tracking: Google Scholar, Scopus and Web of Science. *Biomed Digit Libr*, 3(7). https://doi.org/10.1186/1742-5581-3-7

Beel, J., and Gipp, B. (2009). Google Scholar's ranking algorithm: an introductory overview. *In Proceedings of the 12th international conference on scientometrics and informetrics*, 1, 230-241. Retrieved from https://docear.org/papers/Google%20Scholar's%20Ranking%20Algorithm%20--%20An%20Introductory%20Overview%20--%20preprint.pdf.

Bojadjiev, M., Mileva, I., Pavlova, S. and Krliu-Handjiski, V. (2023). Understanding University Rankings and the Need for Academic Ranking of Balkan Universities. *International Journal of Euro-Mediterranean Studies*, 16(1), 73-91. https://emuni.si/ISSN/2232-6022/16.73-91.pdf.

Brescialibrary. (2020). *Google Scholar: A Credible Database?* Retrieved from https://beryliveylibrary.wordpress.com/2010/10/21/google-scholar/?fbclid=IwAR31_Ig_Y3KwlhOQ3QM58uBcAfwt3qn5zNE1ufQlIZvEzZ3B33Aqzx_hMGeo

Cabezas-Clavijo, A. and Delgado-Lopez-Cozar, E. (2013). Google Scholar and the h-index in biomedicine: The popularization of bibliometric assessment. *Medicina Intensiva*, 37(5), 343-354. https://doi.org/10.1016/j.medine.2013.05.002

Chen, X., O'Kelly, K., Antell, K., and Strothmann, M. (2013). Cross-examining Google Scholar. *Reference and User Services Quarterly*, 52(4), 279-282. https://doi.org/10.5860/rusq.52n4.279.

Craig, O. (2021). *Comparing World University Rankings: THE, QS and Shanghai*. Retrieved from https://www.topuniversities.com/student-info/university-news/comparing-world-university-rankings-qs-shanghai

Delgado López-Cózar, E. (2013). The Google Scholar Family: ¿Is it an alternative for the evaluation of science? *En: IV Seminario EC3: Altmetrics y Unidades de Bibliometría. Universidad de Granada.*

Dewan, P. (2012). Making the Most of Google Scholar in Academic Libraries. *Feliciter (CLA)*, 58(6), 41-42. https://scholars.wlu.ca/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1024&context=lib_pub.

Falagas, M.E., Pitsouni, E.I., Malietzis, G.A. and Pappas, G. (2008). Comparison of PubMed, Scopus, Web of Science, and Google Scholar: strengths and weaknesses. *The FASEB Journal*, 22, 338-342. https://doi.org/10.1096/fj.07-9492LSF

Halevi, G., Moed, H., and Bar-Ilan, J. (2017). Suitability of Google Scholar as a source of scientific information and as a source of data for scientific evaluation – Review of the Literature. *Journal of Infometrics*, 11, 823-834. https://doi.org/10.1016/j.joi.2017.06.005

Harzing A.W.K., and van der Wal, R. (2008). Google Scholar as a new source for citation analysis. *Ethics Sci Environ Polit*, 8, 61-73. https://doi.org/10.3354/esep00076

Henderson, J. (2005). Google Scholar: A source for clinicians? *CMAJ*, 172(12), 1549–1550. https://doi.org/10.1503/cmaj.050404

Howland, J., Wright, T. C., Boughan, R. A., and Roberts, B. C. (2009). How Scholarly is Google Scholar? A comparison to library databases. *College, and Research Libraries*, 70(3), 227-234. https://doi.org/10.5860/0700227

Jacso, P. (2005). Google Scholar: the pros and cons. *Online Information Review*, 29(2), 208-214. D https://doi.org/10.1108/14684520510598066

Jensenius, F.R., Htun, M., Samuels, D.J., Singer, D.A., Lawrence, A. and Chwe, M. (2018). The Benefits and Pitfalls of Google Scholar. *PS: Political Science & Politics*, 51(4), 820-824. doi: https://doi.org/10.1017/S104909651800094X

Kousha, K., and Thelwall, M. (2007). Google Scholar Citations and Google Web/URL Citations: A Multi-Discipline Exploratory Analysis. *Journal of the American Society for Information Science and Technology*. https://doi.org/10.1002/asi.20584

Library Guides. (2023). *Researcher Support Library Services: Bibliometrics for Tracking & Measuring Your Impact.* Retrieved from https://plymouth.libguides.com/research/impact

McQuade Library. (2021). *Google Scholar Strengths*. Retrieved from https://libguides.merrimack.edu/GoogleScholar/StrengthsWeaknesses

Moed, H.F., Ilan, J.B. and Halevi, G. (2016). A new methodology for comparing Google Scholar and Scopus. *Journal of Informetrics*. 10(2), 533-551. https://doi.org/10.1016/j.joi.2016.04.017

Noruzi, A. (2005). Google Scholar: The New Generation of Citation Indexes. *Libri,* 55(4), 170-180. https://doi.org/10.1515/LIBR.2005.170

Orduña-Malea, E., Ayllón, J., Martín-Martín, A. and Delgado López-Cózar, E. (2015). Aplicaciones métricas de Google Scholar para la evaluación del impacto científico. *IV Jornadas de Intercambio y Reflexión acerca de la Investigación en Bibliotecología, La Plata, Argentina. En Memoria Académica*. https://www.memoria.fahce.unlp.edu.ar/trab_eventos/ev.5307/ev.5307.pdf.

Oregon State University, (2023). *Citations 101*. Retrieved from https://guides.library.oregonstate.edu/c.php?g=286173&p=1905749

Rovira, C., Codina, L., Guerrero-Solé, F. and Lopezosa, C. (2019). Ranking by Relevance and Citation Counts, a Comparative Study: Google Scholar, Microsoft Academic, WoS and Scopus. *Future Internet*, 11(9). https://doi.org/10.3390/fi11090202

Shultz, M. (2007). Comparing test searches in PubMed and Google Scholar. *Journal of the Medical Library Association,* 95(4), 442-445. https://doi.org/10.3163/1536-5050.95.4.442

Tulsa Community College Library. (2022). *Google Scholar: an Introduction to Google Scholar: Citations.* Retrieved from https://guides.library.tulsacc.edu/c.php?g=118408&p=770550

University of Pitsburgh Library System. (2023). *Google Scholar*. Retrieved from https://pitt.libguides.com/googlescholar/citations

Walters, W.H. (2007). Google Scholar coverage of a multidisciplinary field. *Information Processing & Management*, 43(4), 1121-1132. https://doi.org/10.1016/j.ipm.2006.08.006

Yang, K., and Meho, L.I. (2007). Citation Analysis: A Comparison of Google Scholar, Scopus, and Web of Science. *Proceedings of the American Society for Information Science and Technology,* 43(1), 1-15. https://doi.org/10.1002/meet.14504301185

Acknowledgments

Not Applicable.

Funding

Not Applicable.

Competing 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.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Macrothink Institute.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

Open access

Copyrights