

ITE

2018



INFORMATION TECHNOLOGIES
IN EDUCATION

International specialized scientific and technical exhibition-forum

NOVEMBER 28-30

XVIII INTERNATIONAL SCIENTIFIC-PRACTICAL CONFERENCE
«MANAGEMENT OF UNIVERSITY LIBRARIES»

Google Scholar and the national institutional repositories: the case of Belarus

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DE GRANADA



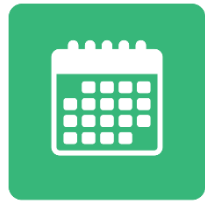
GOALS



A To provide evidence about the **technical requirements of Institutional repositories** to be indexed in Google Scholar

B To analyse the presence of the main Belarusian institutional repositories

AGENDA



- 1. Scientific Communication revolution**
- 2. Google Scholar revolution**
- 3. Google Scholar Index**
- 4. Final Remarks**



The Scientific Communication Revolution



Journal
Articles



Books



Proceedings



Publish



Spread



Documents indexed in
Catalogues / Databases



Offprints / Reprints

The Scientific Communication Revolution



PUBLISH
Congress, Journal, Press

DEPOSITE
Repository and Platforms



INDEX
Search Engines



DISSEMINATE
Social Media

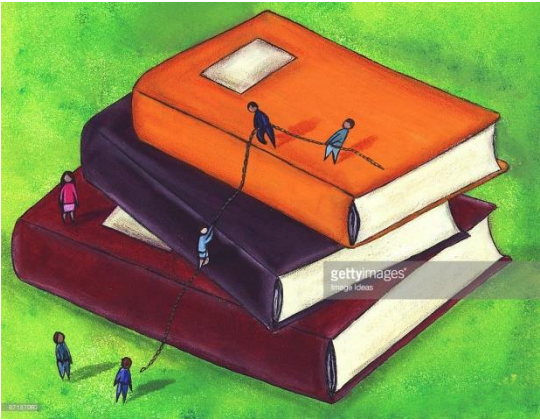
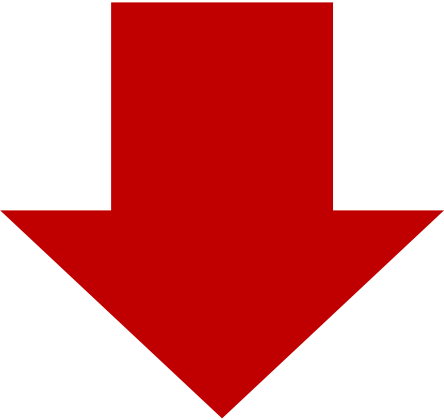


MONITOR
Research Analytics





New Model of Scientific Communication



New Model of Scientific Evaluation

The Google Scholar Revolution



[Anurag Acharya](#)



2004

2018

 Search

Stand on the shoulders of giants

[About Google Scholar](#) - [Google Home](#)

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Articles Case law

The Google Scholar Revolution



Google Scholar as
Search Engine



Google Scholar as
Bibliometric Tool

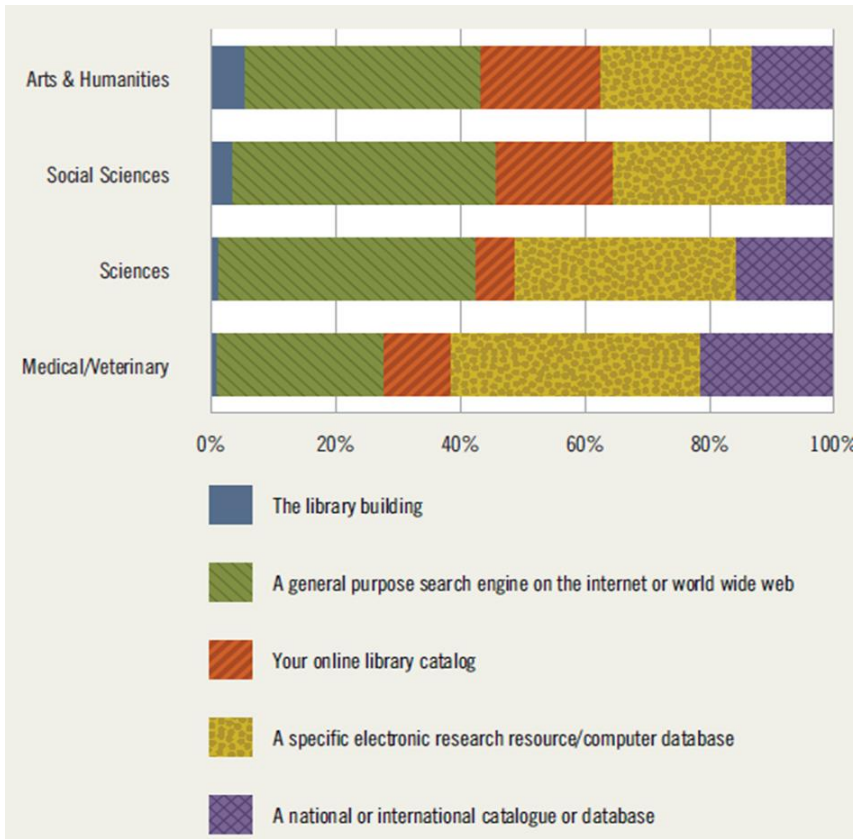
The Google Scholar Revolution



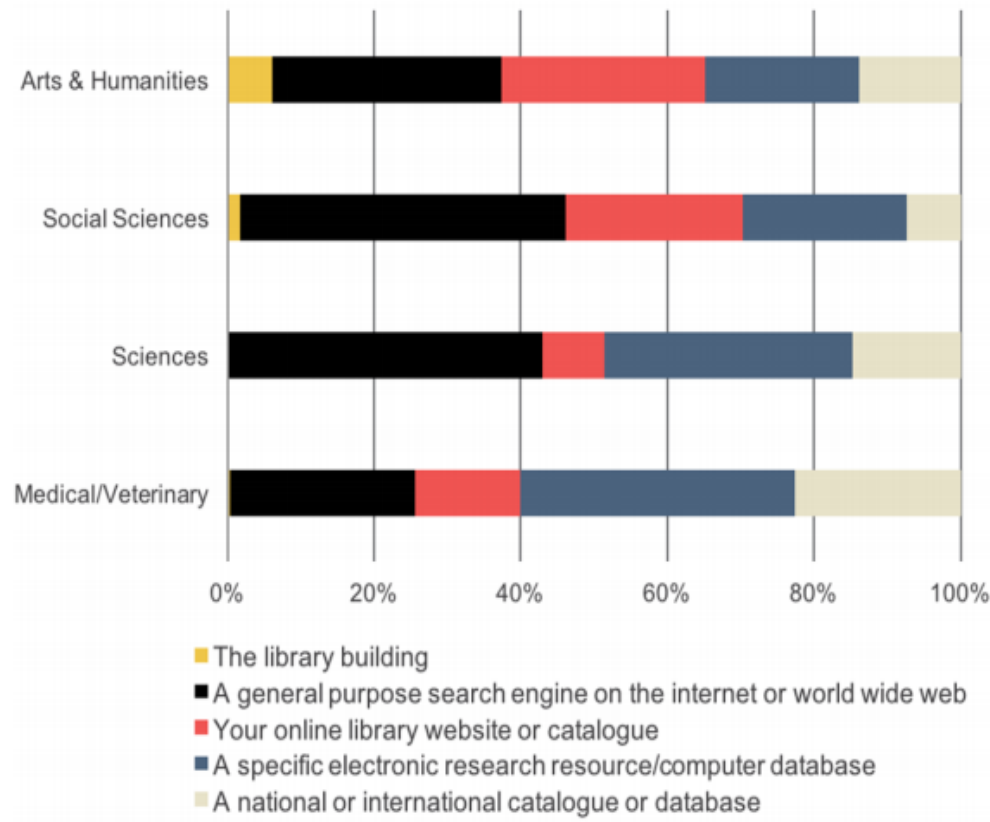
Where do Scholars start to SEARCH for Scientific Literature?



2012



2015



Housewright, R.; Schonfeld, Roger C. & Wulfson, K. (2013). [UK Survey of Academics](#)

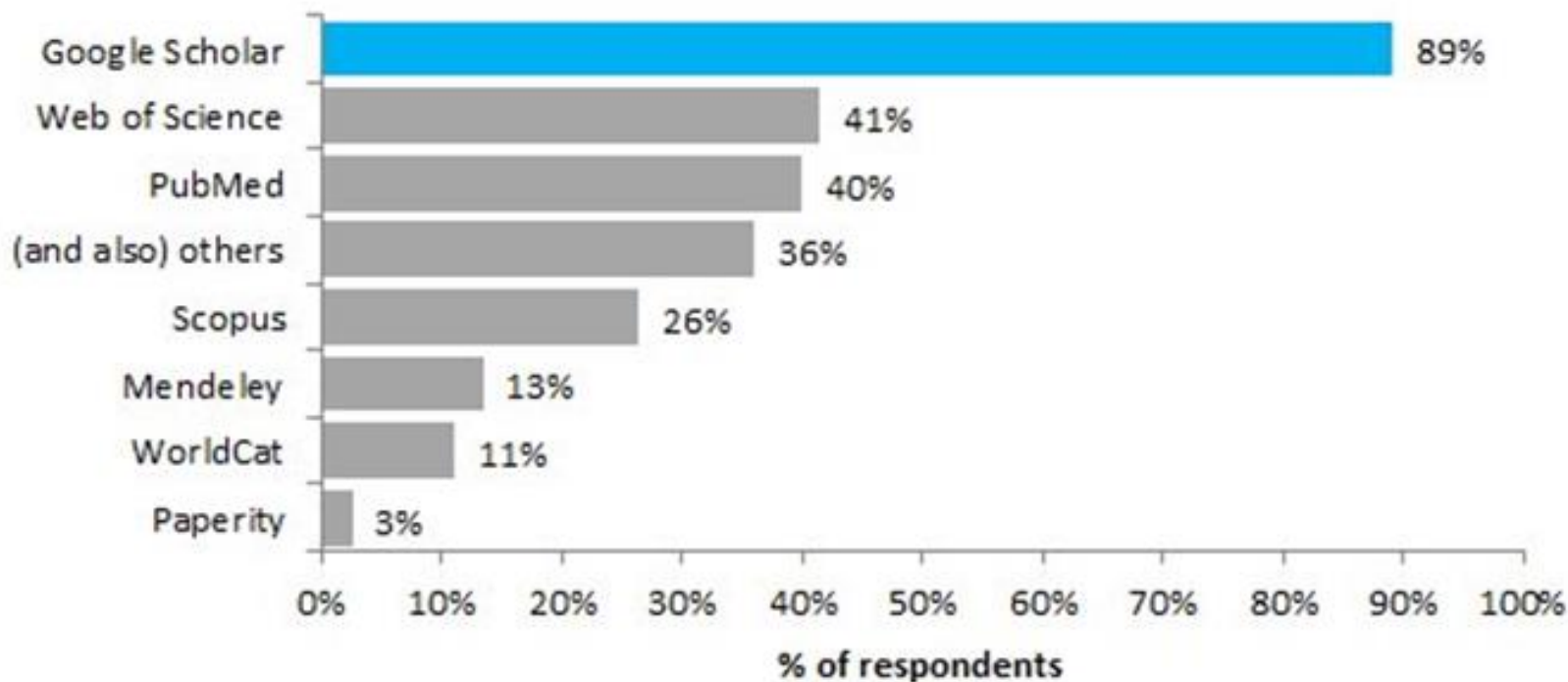
Wolf, C.; Rod, Alisa B. & Schonfeld, Roger C. (2016). [UK Survey of Academics](#)

The Google Scholar Revolution



What tools/sites do you use to search literature / data etc.?

n = 20427



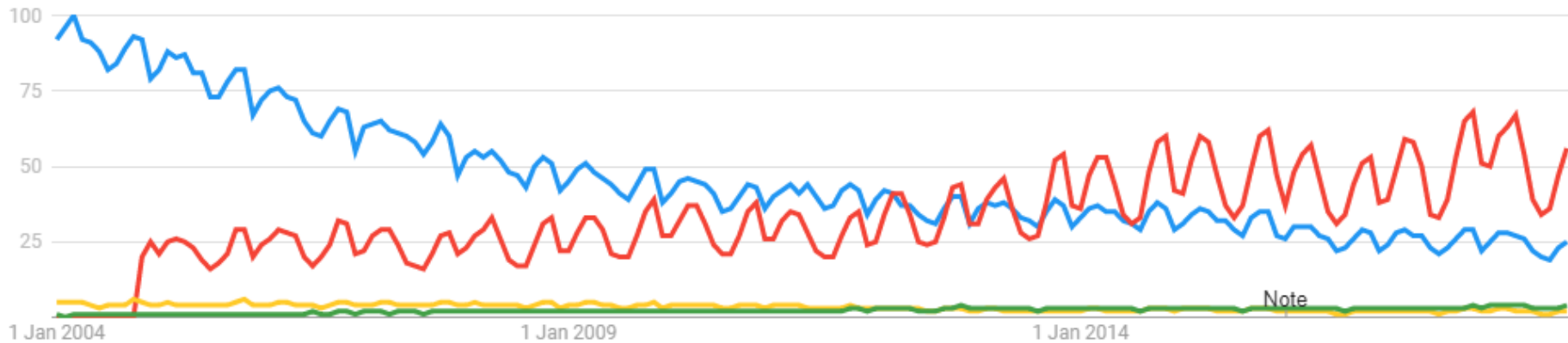
Bosman, J. et al (2016). [Innovations in scholarly communications – data of the global 2015-2016 survey.](#)

The Google Scholar Revolution

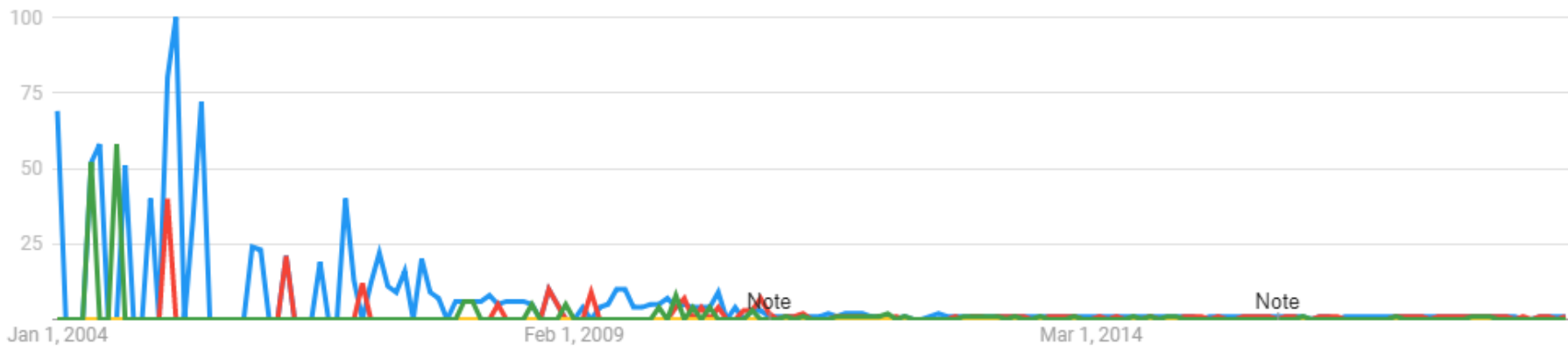


What are the **search trends** in bibliographic databases usage?

Worldwide



Belarus



- Pubmed
- Google Scholar
- Web of Science
- Scopus

The Google Scholar Revolution



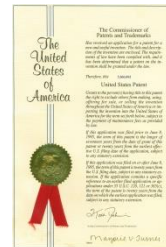
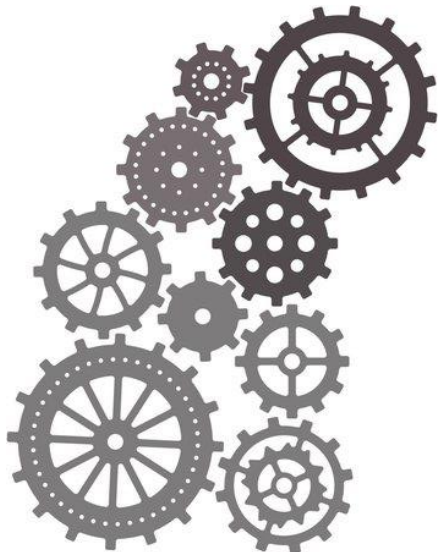
Google Scholar **only index academic documents** deposited in the **Academic Web**



Journal



Article



With 3 Exceptions:
Books, Patents and Case Laws



□ Main Information Sources in Google Scholar

R	SOURCE	URL	HITS
1	China National Knowledge Infrastructure	cnki.com.cn	17600000
2	*Elsevier 2	sciencedirect.com	9340000
3	John Wiley & Sons	wiley.com	5960000
4	Springer	springer.com	5590000
5	Google Books	books.google.com	3860000
6	Institute of Electrical and Electronics Engineers (IEEE)	ieee.org	3410000
7	Taylor & Francis	tandfonline.com	3200000
8	National Institute of Informatics (NII)	nii.ac.jp	2960000
9	JSTOR	jstor.org	2920000
10	Japan Science & Technology Agency (JST)	jst.go.jp	2740000
11	Europe PubMed Central	europemc.org	2290000
12	ResearchGate	researchgate.net	2020000
13	Proquest	proquest.com	1670000
14	Astrophysics Data System	adsabs.harvard.edu	1510000
15	J-STAGE	jstage.jst.go.jp	1460000
16	US National Institute of Health (NIH)	nih.gov	1420000
17	Harvard University	harvard.edu	1410000
18	Sage	sagepub.com	1370000
19	Pubmed	ncbi.nlm.nih.gov	1360000
20	Lippincott Williams & Wilkins	lww.com	1240000

DELGADO LÓPEZ-CÓZAR, E.; ORDUNA-MALEA, E.; MARTÍN-MARTÍN, A (2018). Google Scholar as a Data Source for Research Assessment. In W. Glänzel, H.F. Moed, U. Schmoch, & M. Thelwall (Eds.). Springer handbook of science and technology indicators. Heidelberg: Springer.



1 Step 1: Inclusion in the Academic Web

Type of website:

DSpace repository	EPrints repository	Other repository
Open Journal Systems OJS website	Other journal website	Personal publications



<https://support.google.com/scholar>



2 Step 2: Basic requirements

In order to be properly indexed, the website must offer, free of charge and easy to consult - when a user clicks on a Google Scholar search result -, **one** of the following options::

a) Academic contents

b) Abstracts

It is accepted either the complete abstract or the first page of the contribution (including or not the abstract).



THOSE DOCUMENTS WITHOUT **AUTHORS OR WITHOUT TITLE CAN BE EXCLUDED AUTOMATICALLY**



THOSE DOCUMENTS WITHOUT **ABSTRACT, ARE AUTOMATICALLY EXCLUDED**

3 Step 3: Technical requirements (I): accept the visit

Website must allow Google Scholar bot visit. On the contrary, it will not be indexed

<http://www.robotstxt.org>

```
User-agent: Googlebot  
Allow: /
```



Conversely, bots must be blocked from accessing dynamically generated pages, unusable for locating records, such as shopping carts, forms, etc.

```
User-agent: *  
Disallow: /add_cart.php
```





4

Step 4: Technical requirements (II): accessible visit

The website should avoid requiring users (or search bots), before reading the summary (or full text), the following actions:

- Identify themselves as registered users
- Install special software
- Accept disclaimers
- Reject pop-up windows or interstitial ads
- Click on links, press buttons or scroll through the page



5 Step 5: Indexing requirements

A) Article URL:

- Each record should must have its **own URL**
 - ✓ Forget diverse articles within one file
 - ✓ Forget diverse files for one article
- Those URLs unavailable either for the search engine or final users, **will be excluded**
- Create simple, short and easy-to-remember URLs. Please avoid alphanumeric codes...



http://www.upv.es/pls/obib/sic_public.FichPublica?P_VISTA=&P_IDIOMA=v&P_ARM=5123



5

Step 5: Indexing requirements

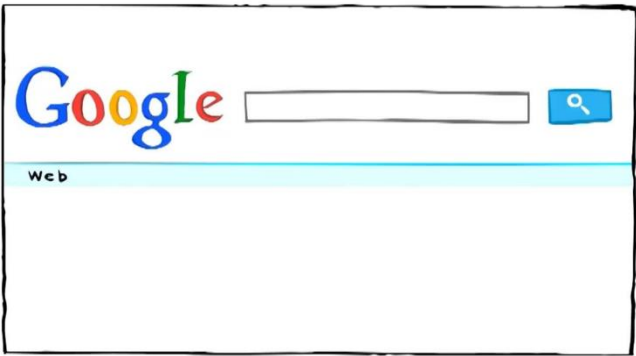
B) Article URL Access

- It is recommended that each article be accessible from the home page, following a maximum of **10 links**
 - ✓ For **less than 1000 documents**, it is recommended to create an HTML file with a link to the URL of each document.
 - ✓ If **thousands of documents** are handled, it is recommended to provide a way to sort the records by publication date or record date, to facilitate the task to the search robot
 - ✓ If **hundreds of thousands** of documents are handled, it is recommended to create an additional search interface that lists the included articles only in the last two weeks.

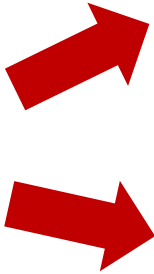


5 Step 5: Indexing requirements

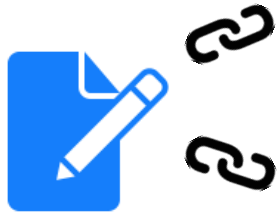
Ejemplo: less than 1000 records



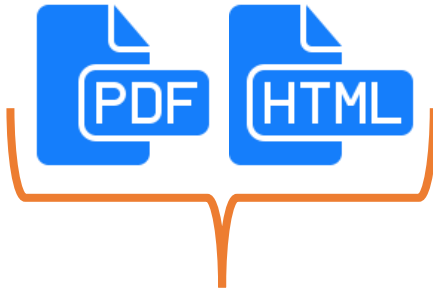
Search result



List / link



Record



1



- a) **Content:** full text or abstract
- b) **Metadata**

Step 5: Indexing requirements

C) Meta-tags:

- Configure the export of bibliographic data in HTML meta-tags.
- Google Scholar supports Highwire Press, Eprints, BE Press and PRISM.
- Use Dublin Core as a last option.



5 Step 5: Indexing requirements

C) Meta-tags: example

```
<meta name="citation_title" content="The testis isoform of the phosphorylase  
kinase catalytic subunit (PhK-T) plays a critical role in regulation of glycogen  
mobilization in developing lung">  
<meta name="citation_author" content="Liu, Li">  
<meta name="citation_author" content="Rannels, Stephen R.">  
<meta name="citation_publication_date" content="1996/05/17">  
<meta name="citation_journal_title" content="Journal of Biological Chemistry">  
<meta name="citation_volume" content="271">  
<meta name="citation_issue" content="20">  
<meta name="citation_firstpage" content="11761">  
<meta name="citation_lastpage" content="11766">  
<meta name="citation_pdf_url" content="http://www.example.com/content/271/20/11761.full.pdf">
```

Option B:
DC.identifier tags

Step 5: Indexing requirements

D) Indexing without meta-tags (special for PDF files):

Title:

- ✓ Use the **largest font size** in the document.
- ✓ Use <h1> or <h2> tags.
- ✓ Use CSS, through the class "citation_title".

Authors

- ✓ They must be placed immediately **before or after the title**
- ✓ Use <h3> tags
- ✓ Use CSS, through the class "citation_author".

Bibliographic Information

- ✓ To be included in the header or footer of the first page.

Text Fonts

- ✓ Avoid Type 3 fonts in PDF files

Step 5: Indexing requirements

E) Bibliographic references mark-up:

- Use a standard header, such as "references", "bibliography"

- Individual references can be numbered:
 - ✓ In PDF: [1], [2]...
 - ✓ In HTML: include the tag:

Other technical requirements

File types accepted: HTML, DOC, PDF (GZ), PS (GZ)

Unused files: PPT, XLS...

Do not exceed 5 MB. If it does:

- ✓ full text index will only be stored in Google.
- ✓ Bibliographic index will be included in Google Scholar



Some descriptive information concerns

Browse by Country

[Up a level](#)

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[Graphical analysis](#) [Search Content](#)

- [Geoname Location \(28\)](#)
 - [Europe \(28\)](#)
 - [Belarus \(28\)](#)


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Number of items at this level: 28.


Research Institutional or Departmental



Deposit Activity 

[Репозиторий УО "Витебская ордена "Знак Почета" государственная академия ветеринарной медицины"](#) (unknown number of records) - 13 February 2018 [[Record Details](#)]



Deposit Activity 

[Репозиторий УО "Мозырский государственный педагогический университет имени И.П.Шамякина"](#) (unknown number of records) *Mozyr State Pedagogical University named after I.P. Shamyakin* - 28 March 2017 [[Record Details](#)]

[Registry of Open Access Repositories](#)



<http://roar.eprints.org/view/geoname/geoname=5F2=5FBY.html>

The Belarusian Repositories



Some language translation concerns

Comunidades en DSpace

Elija una comunidad para listar sus colecciones

- [ВГУ в печати](#) 537
- [Диссертации и авторефераты диссертаций](#) 4
- [Материалы конференций, конгрессов, семинаров](#) 7561
- [Научная библиотека ВГУ](#) 237
- [Периодические издания университета](#) 8890
- [Сборники научных статей](#) 812
- [Факультеты университета](#) 2187

Añadido Recientemente

Актуальные проблемы языкознания

Слесарева, Т. П.; Синкевич, Т. И. (Витебск : ВГУ имени П.М. Машерова, 2018)

В сборник включены УМК по дисциплинам, входящим в цикл "Актуальные проблемы языкознания":

"Лингвистическая терминология", "Теория и практика перевода" и конспект лекций по дисциплине "Анализ художественного текста в ..."

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The Belarusian Repositories

Some indexing concerns

UNIVERSITY	URL	ITEMS	IR	UNI	% (UNI)	% (ITEMS)
Belarusian State University Digital Library	elib.bsu.by	149833	17000	20600	82.5	11.3
Belarusian National Technical University Repository	rep.bntu.by	45595	37700	39200	96.2	82.7
Yanka Kupala State University of Grodno Publications	elib.grsu.by	40948	6490	7100	91.4	15.8
Belarusian State Pedagogical University Repository	elib.bspu.by	35222	2410	2640	91.3	6.8
Belarusian State University of Informatics and Radioelectronics Repository	libeldoc.bsuir.by	19968	0	5820	0.0	0.0
Belarusian State Medical University Repository	rep.bsmu.by	18257	5890	6450	91.3	32.3
Digital Library of Polotsk State University	elib.psu.by	16651	9920	10200	97.3	59.6
Vitebsk State University Institutional Repository	lib.vsu.by	15228	3650	4740	77.0	24.0
Belarusian State University of Culture and Arts Repository	repository.buk.by	15163	0	0		
Electronic Library of Belarusian State Technological University	elib.belstu.by	13414	7610	7970	95.5	56.7
Polesky State University Repository	rep.polessu.by	12801	10300	10500	98.1	80.5
Electronic Library P O Sukhoi State Technical University of Gomel	elib.gstu.by	12415	8620	7390	116.6	69.4
Electronic archive of Vitebsk State Medical University	elib.vsmu.by	12206	0	36	0.0	0.0
Mogilev State University AA Kuleshova Institutional Repository	libr.msu.by	7157	5830	5950	98.0	81.5
Repository of Gomel State University	repo2018.gsu.by	6029	491	2010	24.4	8.1
Russian University Digital Library	e.biblio.bru.by	5783	2700	3290	82.1	46.7
Belarusian State Agrarian Technical University Repository	rep.bsatu.by	4483	2480	2560	96.9	55.3
Repository of Baranovichi State University	rep.barsu.by	4178	2940	3270	89.9	70.4
Gomel State Medical University Repository	elib.gsmu.by	3821	1550	1910	81.2	40.6
Repository Mozyr State Pedagogical University I P Shamyakin	dspace.mspu.by	2999	1070	1710	62.6	35.7
Minsk University of Management Electronic Library	elibrary.miu.by		4260	11200	38.0	
Belarus State Economic University Digital Library	edoc.bseu.by		0	0		

Final Remarks

- Repositories must contain all the **scientific heritage** of the institution in one place.
- Repositories must be **compliant with Google Scholar** since this academic search engine is the current first door for academic searches in the world.
- Repositories must be **compliant with users**: data, contents and services oriented to final users.
- Repositories do not have to include **journals portals**



TIPS!

Final Remarks

- Repositories must be included within the **institutional web domain**
- Repositories must avoid more than 4 **web directory levels** (repository.university.by).
- Repositories must avoid using the **software name** in the URL (e.g., dspace.university.by)
- Repositories must avoid the content dispersion with **academic subunits** in separate independent repositories
- Repositories must avoid including **items not authored by its members** as much as possible.
- URLs of full text documents must end with the **file format** (e.g., .pdf).
- URLs of full text documents must avoid using different **numeric (or non-friendly) codes**
- URLs of bibliographic records must point to **OA full text versions** when possible.

Thank you for your Attention!

Дзякуй за ўвагу!

