Awareness of Linked Open Data Among the Employees of Polish Libraries, Archives, and Museums. Results of a Survey – Pilot Study

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Abstract

Purpose/Thesis: This article presents the results of a survey conducted in January 2021 among employees of Polish libraries, museums, and archives, examining their awareness of open linked data technologies. The research had a pilot character and its results will be used to improve the questionnaire and to conduct research on a wider scale.
Approach/Methods: The survey method was used in the study.
Results and conclusions: On the basis of answers received, it can be concluded that open linked data is not yet very well-known among employees of Polish libraries, museums, and archives. Those most aware of technologies allowing for machine understanding of content shared on the Web are doctorate degree-holders employed in research libraries. Furthermore, awareness of the projects using LOD technologies does not correlate with awareness of these technological solutions.
Research limitations: The number of respondents (415) constitutes 1% of all the people employed in libraries, archives, and museums in Poland (based on data provided by the Central Statistical Office of Poland). This is not a large number, but considering the variety among the respondents, the sample can be considered representative.
Originality/Value: The awareness of Linked Open Data among employees of Polish libraries, archives, and museums has not been the subject of any study so far. In fact, this type of research has not been conducted in other countries either.

Keywords

Linked Open Data. Polish archives. Polish libraries. Polish museums. Survey.

Received: 28 July 2021. Reviewed: 10 October 2021. Revised: 25 November 2021. Accepted: 17 December 2021.

1. Introduction

Linked Open Data (LOD), implemented in many projects around the world, is one form of ensuring the semantic nature of the Web. The use of simple mechanisms (e.g., storing data in the form of the so-called RDF triples consisting of a subject, predicate, and object) allows to store data in such a way that it is understandable not only for humans but also for machines. This affects the development of artificial intelligence (AI), the capabilities

of search engines, the development of the Internet of Things, etc. (for more information on LOD theory, see, for example Alemu et al., 2012; Heath & Bizer, 2011; *Linked Open Data – What is it?*, 2012).

The issue of Linked Open Data applied among cultural and scientific institutions has not been the focus of too many authors in Poland so far. The studies are actually limited to a few publications (see, among others, bgpw, 2019; Dobrowolska, 2017; Kowalewski, 2018; Nahotko, 2018; Roszkowski, 2010; Siwecka, 2018a, 2018b; Wassilew & Papińska-Kacperek, 2019). This topic has been discussed wider in foreign literature (for a list of publications concerning LOD in European national libraries, see Siwecka, 2018c). Polish sources addressing the issue of LOD also include conference presentations that discuss particular aspects of implementing such solutions in specific projects (e.g., in the Bridge of Knowledge project of the Gdansk University of Technology or the Polish Medical Platform (PPM) implemented by eight medical institutions).

Furthermore, despite many foreign publications on LOD itself and LOD in cultural institutions (see, among others, Barber et al., 2015; Bojārs, 2016; Di Giorgio, 2015; Gilbert, 2017; Harris, 2016; Janes, 2015; Janes, 2017; Mayer, 2015; Park, 2015; Skevakis et al., 2014; Van Hooland & Verborgh, 2016), I did not find any concerning familiarity with this issue among Libraries, Archives, and Museums (LAM) sector employees. Since Semantic Web technologies gives LAM instutitions opportunity to make their resources visible (see Alemu et al., 2012; IFLA, 2014; Library of Congress, 2008; Siwecka, 2018b; Žumer, 2009), it would be interesting to know to what extent LAM professionals are aware of solutions enriching the Semantic Web. Especially due to the rapid popularisation of the idea of the Semantic Web and the implementation of such solutions not only in various library, museum and archive projects (especially abroad, for example, British Museum Semantic Web Collection, datos.bne.es, data.bnf.fr, heritagedata.org) but also considering public data (e.g., data.gov.uk). There is also a need to examine to what extent this topic is known to the Polish library, museum, and archive staff.

This article presents the results of the research conducted in January 2021 and reflects on whether and how modern solutions can also be promoted in Polish projects.

Based on the survey, the article attempts to answer the following questions:

(1) How many Polish librarians, archivists, and museum workers have knowledge about LOD?
(2) What LOD projects do they know?
(3) Does this knowledge can be correlated with the level of education, age, or the workplace?
(4) Is there a correlation between the number of resources published about LOD projects and the awareness of those projects?

2. Survey

The anonymous online survey was conducted between 8 and 25 January 2021 (see Appendix 1). Due to the restrictions of the COVID-19 pandemic, the electronic questionnaire was used to collect data. For the purpose of the pilot study, it was also the fastest way of collecting data. The questionnaire was spread through social media (mainly Facebook groups

dedicated to library, archival, and museum issues, e.g., Archiwiści [Archivists], Biblio, Bibliotekarze szkolni, bibliotek pedagogicznych i in. [School librarians, educational librarians, etc.], Muzea Dla Klimatu [Museums for Climate], Muzealnicy [Museum workers], Sekcja Bibliotek Akademickich [Academic Libraries Section], Strefa Bibliotekarza [Librarian's Zone]) and private messages to individual institutions. The survey was also available on the portals and websites of institutions such as NUKAT – The Union Catalog of Polish Research Library Collections and the Federacja Bibliotek Cyfrowych [Digital Libraries Federation]. It is worth noticing here that there are many more Polish Facebook groups for librarians than for archivists and museum professionals, and it would be interesting to investigate the reason for this discrepancy. Due to this inequality, messages were also sent to different archives and museums through their Facebook profiles and webmail. Unfortunately, despite sending out more than 50 messages and more than 1000 followers in the Facebook's archives and museum groups, the percentage of responses from these groups was much lower than from librarians (see section 3.1.1).

The survey consisted of eight questions. The first was about familiarity with different projects. In this way, I wanted to check whether the familiarity with a particular project is related to the knowledge of the project's use or non-use of LOD technology. The next section of the questions was concerned with knowledge of LOD and the 5-star open data scheme. If the respondent answered negatively to the question about knowledge of the issues, the survey redirected her/him to the respondent's particulars. If the answer to the question was affirmative, the respondents could answer further questions about 1) sources of information where they encountered the LOD issue; 2) an open question about known Polish LOD projects; 3) closed questions about foreign LOD projects. The questionnaire ended with respondent's particulars that collected data on gender, age, level of education, and place of work.

The target group of the survey was employees of Polish archives, libraries, and museums. A total of 427 persons responded to the questionnaire, of whom 415 represented the target research group (editors, students, and university teachers were excluded, as well as persons who did not specify their place of work).

3. Results

3.1. Respondents

The first section of the results includes the review of participant demographics[1].

[1] With regard to statistical data on the number of people employed in the surveyed institutions in Poland, the group of respondents can be considered representative – according to information obtained on 20 January 2021 from the Statistical Office in Kraków, 16.338 librarians were employed in public libraries, 7.377 in scientific libraries, 1210 in pedagogical libraries in Poland in 2019. A total of 16.656 people were employed in museums in Poland in 2019, including 7059 content workers. Slightly different data was obtained from the Statistical Office in Bydgoszcz (at the end of 2019 there were 22.496 people employed in libraries, 1.742 in archives and 15.868 in museums in Poland).

3.1.1. Workplace

Concerning workplace, the largest group of respondents are librarians (332 people – 80% of the respondents), and among them, employees of research libraries (a total of 163 people – 39% of the respondents), in second place are employees of public libraries (municipal, communal, county and provincial) (101 people – 24% of the respondents), in third place – employees of school libraries (54 people – 13%), then museums (46 – 11 %), archives (36 – 9%), pedagogical libraries (13 – 3%), and other libraries (2 people – 0.5%; one person working in a student library[2] and one person working in a company library).

3.1.2. Education

The vast majority of them are people with a master's degree (350 people – 84% of the respondents). A much smaller group is people with a PhD degree (26 – 6%), a bachelor's degree (22 – 5%) and secondary education (13 – 3%). The smallest percentage of respondents were people with a degree higher than a doctorate and vocational education (1 person each – 0.2%). One public library staff member did not provide education on the survey.

As can be observed in Figure 1, in the combination of the place of work and the level of education, the largest group of respondents is academic library staff with a master's degree, followed by public library staff with the same level of education.

Due to the lack of statistical data on the education of employees of the LAM (Libraries, Archives, Museums) sector in Poland, it is difficult to determine the representativeness of survey respondents in terms of this indicator.

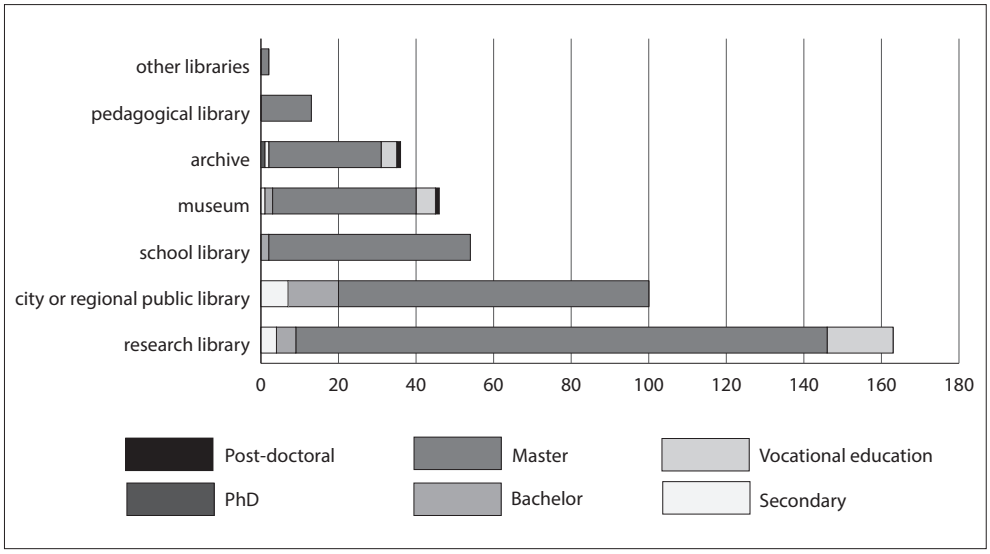


Fig. 1. Workplace and education of survey respondents

[2] Unfortunately, the respondent did not explain in the survey questionnaire what a student library was.

3.1.3. Age

The two largest groups of librarians who participated in the study were between 31 and 40 years of age (97 respondents) and between 41 and 50 years of age (112 respondents) (see Fig. 2). It should be noted that the youngest respondents were 23 years old (this is the age correlated with graduation from a master's degree) and the oldest were 69 years old, which indicates that among the respondents there were also people of retirement age who are still professionally active[3]. Among archivists, the numbers are almost equal for 31–40 (nine respondents), 41–50 (10) and 51–60 (8). For museum employees, the highest percentage of responses appeared among respondents between 25 and 30 years of age and between 31 and 40 years of age (see Figure 2). 25 of the 415 respondents did not answer this question. The Central Statistical Office (Główny Urząd Statystyczny) in Poland does not collect data on the age of the employed, so it is difficult to say whether the age ranges of the respondents reflect employment statistics or rather indicate which age group was more likely to respond to questions included in the electronic form of the survey.

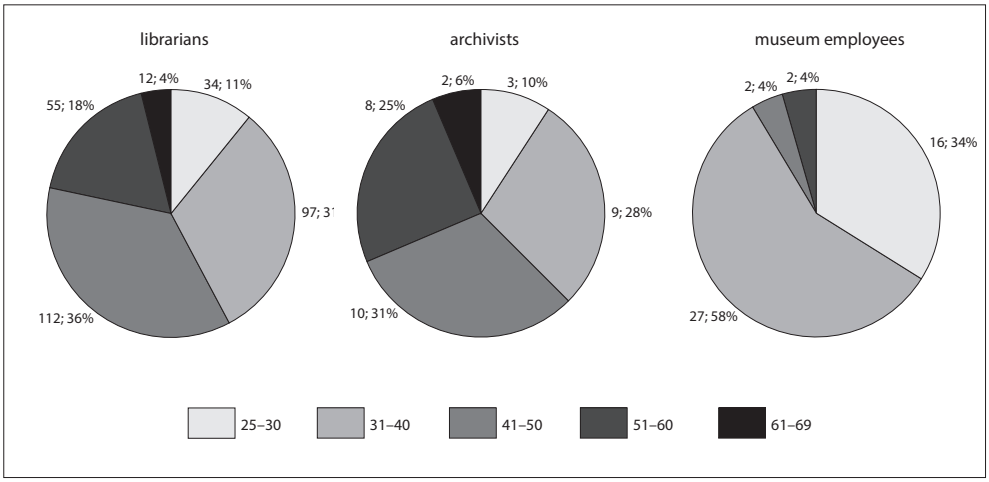


Fig. 2. Age of respondents

3.2. LOD awareness

The primary question in the survey was knowledge of Linked Open Data. To the question *Have you ever heard about Linked Open Data?* 150 (36%) of the respondents answered in the affirmative.

Since the issue of LOD introduced by Tim Berners-Lee is strongly associated with his 5-star Open Data schema, the questionnaire included the question *Have you ever heard about 5-star Open Data schema?* accompanied by an illustration of this schema (see

[3] Retirement age in Poland is differentiated by gender and is 60 for women and 65 for men (as of June 2021) (Ustawa, 1998).

question 3 in Appendix 1). To this question, only 53 (13%) of the respondents answered in the affirmative.

3.2.1. LOD awareness and workplace

According to the survey, the employees of research libraries are the most aware of LOD (54% of them declare that they are aware of this issue), next (with the result of 28%) are employees of museums, archivists, and public librarians. The school and pedagogical librarians are the least aware of LOD (with a result of 17% and 15%). As for other libraries, there are only two respondents (employee of students library and of factory library) and they are not aware of LOD (see Fig. 3).

The highest percentage of those familiar with LOD among academic librarians is most likely because the vast majority of projects using this technology in Poland are carried out by this type of institution. Consequently, their staff are usually more familiar with the topic. They are also more likely to attend specialised scientific conferences where this topic could be discussed.

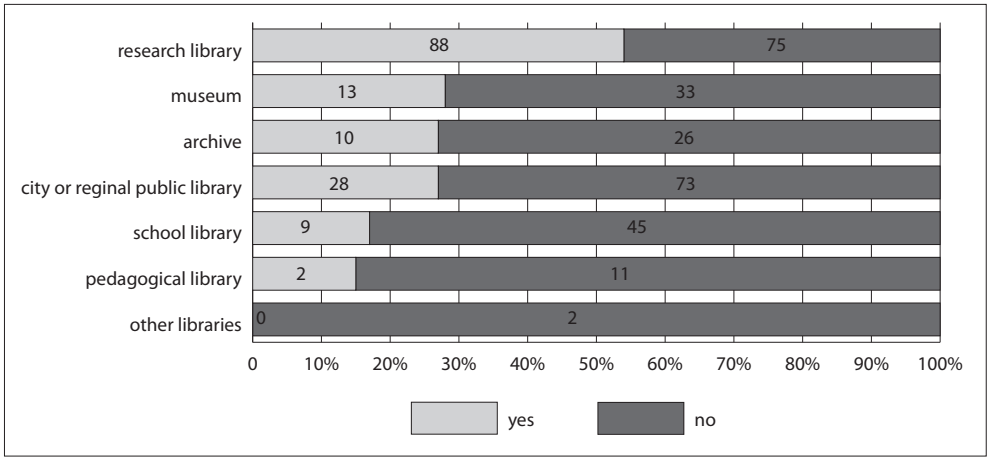


Fig. 3. Awareness of Linked Open Data among employees of different institutions

3.2.2. LOD awareness and education

As we can see in Figure 4, the most aware of LOD are respondents with PhD degrees. However, it is difficult to conclude that this awareness increases with the level of education if we look at data only – there is a higher percentage of respondents with secondary education aware of LOD than with bachelor's and master's degrees. The situation changes if we look at it in terms of absolute numbers, since there are far more respondents with a master's degree who declared their knowledge of LOD (117 versus five with secondary education). Furthermore, I must highlight here that I received only two responses from respondents with postdoctoral degrees and one with vocational education (see Fig. 4).

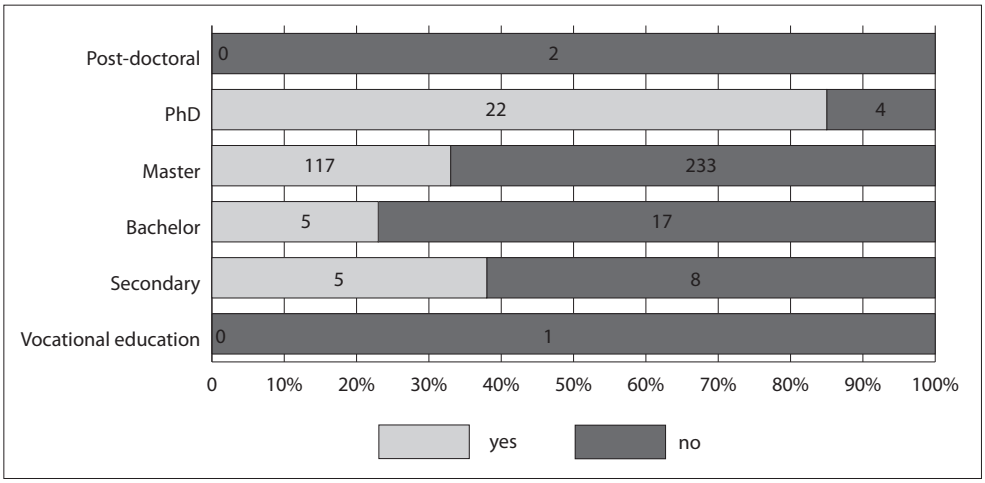


Fig. 4. Awareness of Linked Open Data among employees by the level of education

The above results are difficult to assess as high or low due to the lack of analogous data both among other professional groups in the country and among LAM workers in other countries. It would be worthwhile to conduct similar study to get a broader picture of awareness of new technologies among unit workers for whom it brings great opportunities and chances for development (see, among others: Alemu et al., 2012; BGPW, 2019; Jones & Seikel, 2016; Siwecka, 2018b).

3.3. Source of information on LOD

I also asked 150 respondents who had answered affirmatively to the question about their knowledge of the LOD, in which sources of information they had encountered the topic. (see Fig. 5). The most common source of information on LOD was material available on the Web (130; 87% of respondents indicated that they used these resources), which is not surprising given the availability of materials in this form and their number. It is worth noting here that these are mostly materials in English. The scholarly literature came second (85; 57%), followed by information obtained from colleagues in the field (72; 48%) and at conferences (68; 45%). A professional literature occupied the last place. (e.g., "Bibliotekarz [Librarian]", "Poradnik Bibliotekarza [Librarian's Guide]", it was indicated by 35% of the respondents (52 persons). These results are interesting because, as already mentioned, there are not many publications on this subject in the Polish literature.

Question 5 in the survey (see Appendix 1) allowed respondents to list other sources of information about LOD. The respondents indicated here two additional sources: information obtained during studies and direct work on LOD projects.

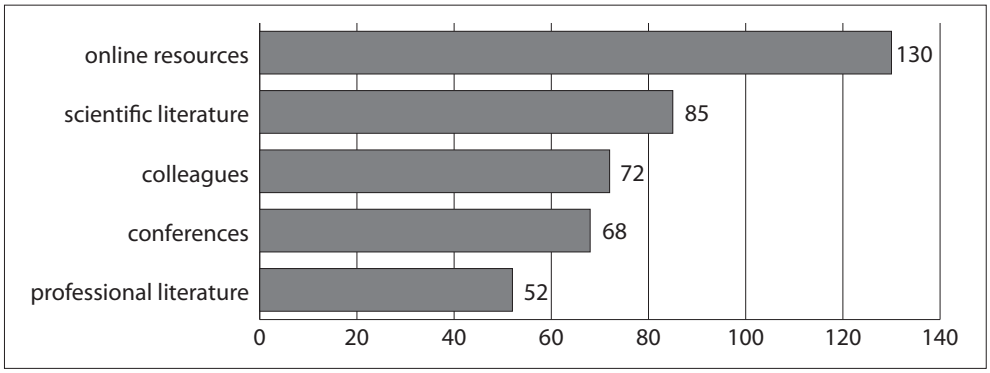


Fig. 5. Sources of information on LOD used by survey respondents

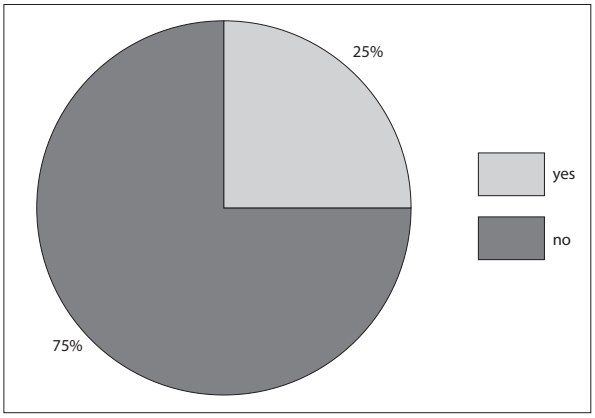


Fig. 6. Knowledge of Polish LOD projects among respondents aware of the existence of LOD

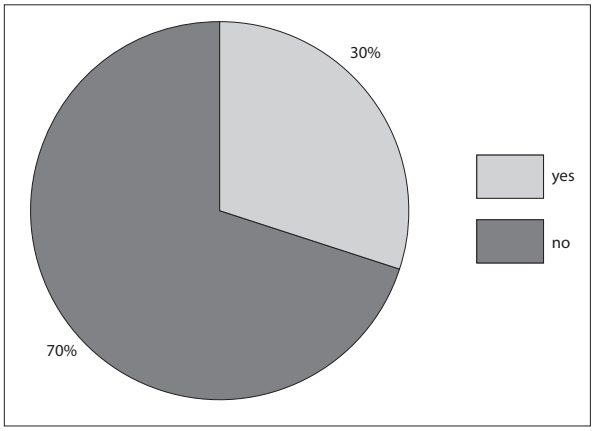


Fig. 7. Knowledge of foreign LOD projects among respondents aware of the existence of LOD

3.4. Knowing LOD projects

I also asked those respondents who had earlier indicated their knowledge about the LOD issues whether they knew any Polish or foreign LOD projects conducted by libraries, museums, or archives. As we can see in Figures 6 and 7, there were 5% more people who admitted to know about foreign LOD projects than Polish LOD projects. It is worth noting that 25% means 37 respondents and 30% means 44 respondents.

3.4.1. Foreign LOD projects

Regarding the knowledge of foreign projects, I also decided to measure the knowledge of the four most popular ones (question 8 in Appendix 1). The respondents indicated that the most popular among them was the project run by Europeana – pro.europeana.eu (34 out of 44 (77%) respondents who confirmed their knowledge of this project) and the British Library portal available at bnb.data.bl.uk (30; 68%). This was followed by the French National Library's portal data.bnf.fr and, in the last place, the Spanish National Library's portal datos.bne.es (see Tab. 1).

Tab. 1. Number of respondents who indicated that particular foreign projects were known

Lp.	Name of the project	Number of responses	% of 44 respondents
1.	pro.europeana.eu	34	77%
2.	bnb.data.bl.uk	30	68%
3.	data.bnf.fr	16	36%
4.	datos.bne.es	6	14%

In the same question, the survey form also provided the opportunity to enter one's own additional answer. The projects projects such as: Gallica, correspSearch, DNB Linked Data Service, id.loc.gov, Transkribus, VIAF and WorldCat were mentioned. Each of those appeared only once in the survey results.

3.4.2. Examples of LOD projects in Poland

As mentioned above, 37 respondents confirmed their knowledge of Polish LOD projects. Among them, 31 people gave examples of such projects. The most numerous group among them were scientific library employees (23 respondents) and the lowest were museums professionals (2), archives (1), and school libraries (1) (Fig. 8). Furthermore, museum and archive workers indicated only Europeana's projects as an example (the second example from a museum employee was the KaRo catalogue which does not implement LOD technology).

Among 31 answers appeared 15 unique projects. In Table 2 we can see that the Polish Platform for Medical Research is the most known (14 indications) – probably it is correlated with many publications and conference speeches devoted to PPM[4]. In the second place, there were four indications of Bridge of Knowledge (Multidisciplinary Open System for Transferring Knowledge And Research Data conducted by the Gdańsk University of Technology) – see Table 2 for more details.

[4] See full list at: https://ppm.edu.pl/about/project.seam?lang=pl&cid=21170

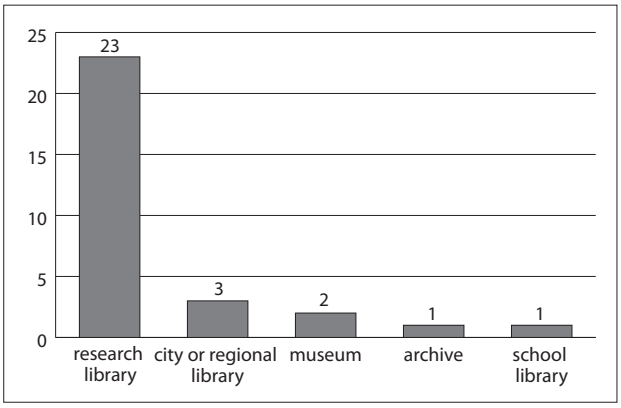


Fig. 8. The number of respondents who gave examples of Polish LOD projects by the workplace

Tab. 2. LOD projects indicated by the respondents

Lp.	Project title	Number of indications
1.	PPM – Polish Platform for Medical Research (https://ppm.edu.pl/index.seam)	14
2.	Bridge of Knowledge – Multidisciplinary Open System form Transferring Knowledge And Research Data (https://mostwiedzy.pl/en/)	4
3.	NUKAT – The Union Catalog of Polish Research Library Collections (http://katalog.nukat.edu.pl/search/query?locale=+EN&theme=nukat)	3
4.	WUT Base of Knowledge – Warsaw University of Technology Base of Knowledge (http://repo.bg.pw.edu.pl/index.php/en/)	3
5.	AZON 2.0 – Resource Atlas of Open Science (https://zasobynauki.pl/)	1
6.	Inter Science Cloud (https://isc.umed.pl/search/index.html)	1
7.	JeromeDL	1
8.	KaRo – Distributed Catalogue of Polish Libraries (https://karo.umk.pl/Karo/?lang=en)	1
9.	Kujawsko-Pomorska Digital Library (https://kpbc.umk.pl/dlibra?language=en)	1
10.	Digital Exhibition Platform (https://expo.bu.umk.pl/)	1
11.	POLONA – National Library of Poland Digital Library (https://polona.pl/)	1
12.	RUJ – Jagiellonian University Repository (https://ruj.uj.edu.pl/xmlui/?locale-attribute=en)	1
13.	Search the Archives (https://www.szukajwarchiwach.gov.pl/)	1
14.	e-service OMNIS of the Polish National Library (https://www.bn.org.pl/projekty/omnis/o-projekcie/)	1
15.	Kronik@ – National Repository Science and Culture Objects (Chronicle) (https://www.gov.pl/web/cyfryzacja/kronik-krajowe-repozytorium-obiektow-nauki-i-kultury)	1

A cursory examination of the analysis of those examples contributed to the formulation of further questions related to the knowledge of the LOD issue among employees of Polish archives, libraries, and museums. The first question could be: *How do the respondents understand LOD?* It is the result of responses received by email to the question of whether a given project actually implements LOD technology. The stakeholders of the NUKAT[5], KaRo[6], and Search in Archives[7] projects responded negatively to this question. Similarly, the Kronik@ project, which has not yet been launched (it is planned to be operational in June 2021), will use the capabilities of the Semantic Web, but these are not solutions based *strictly* on LOD[8] technology. Thus, the question of a proper understanding of LOD should become the basis for further research in the future.

Hence, 12 project remained out of the 15. Further explorations of information about these projects in the literature and on the Internet showed that POLONA is part of the OMNIS e-serwis of the Polish National Library. Thus, finally, we can say about 11 projects.

These 11 projects were the basis for further analysis. Regarding their semantization, five of them provide information about LOD or semantization of a collection on the project's website. Information on RUJ semantization was received in a detailed questionnaire. The OMNIS e-service has some information about semantization in feeds. JeromeDigitalLibrary was a project of semantic digital library realized until 2013. Unfortunately, I did not receive any response about this project. Three of the 11 projects indicated in the survey did not have any information on their websites and also they did not answer my email so it is hard to say whether they are proper examples of LOD implementation (compare Tab. 3).

Tab. 3. Information on semantisation of collections or use of LOD in the project

Lp.	Information on the Web / from the questionnaire	No information
1.	AZON 2.0: on the main website	Inter Science Cloud
3.	Bridge of Data	Kujawsko-Pomorska Digital Library
4.	Digital Exhibition Platform	WUT Base of Knowledge
7.	e-service OMNIS	
8.	JeromeDL	
2.	Kronik@	
5.	PPM	
6.	RUJ	

[5] Information obtained by e-mail on the 25th of January 2021 from Leszek Śnieżko (NUKAT). Moreover, it is worth noticing that NUKAT announced in 2016 and 2017 that VIAF, ISNI and WIKIDATA identifiers were added to their records for personal and corporate names (https://centrum.nukat.edu.pl/pl/komunikaty/111-identyfikatory-viaf-i-isni-w-rekordach-ckhw-nukat) – maybe for some respondents giving the links to other resources in the Internet is sufficient to consider NUKAT as an example of LOD implementation?

[6] Information obtained by e-mail on the 26th of January 2021 from Tomasz Wolniewicz – creator of KaRo catalog.

[7] Information obtained by e-mail on the 2 of February 2021 from Karol Dowgiało from National Digital Archives.

[8] Information obtained in a telephone conversation on 29 January 2021 with Grzegorz Zajączkowski responsible for the Kronik@ project.

After this analysis, one more question remains is there any correlation between knowing the projects and LOD awareness? Based on the answers from questions 1 and 2 in Appendix 1, Figure 9 illustrates the analysis of responses, on the example of of Bridge of Data and Polish Platform for Medical Research, which are the most well-known projects with implemented LOD technology.

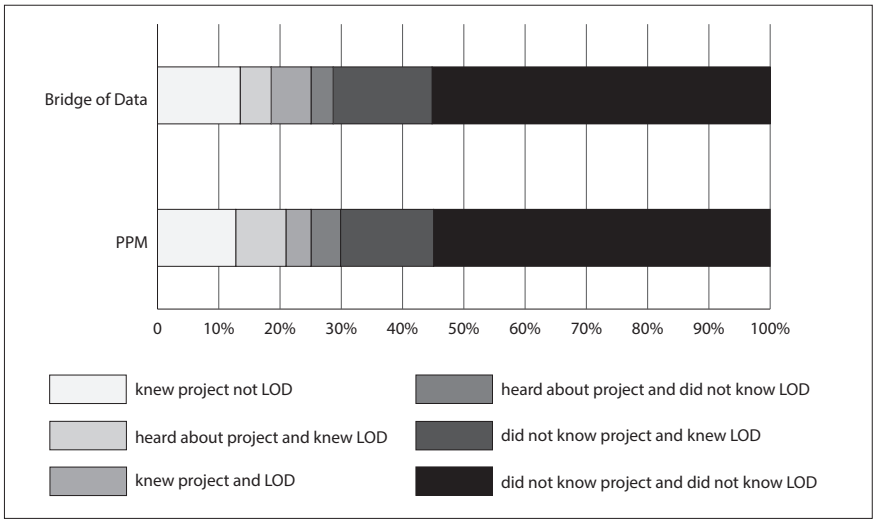


Fig. 9. Correlation between familiarity with the project using LOD technology and awareness of this technology on the example of the PPM project and Bridge of Data

The two darkest colors are a percentage of respondents who knew or heard about projects and were also aware of LOD. A little lighter two colours are the respondents who indicated that they knew or heard about the project but were not aware of LOD. The pale color are the respondents who did not know the projects but knew the LOD and the lightest color are the respondents who knew neither the projects nor the LOD.

We can say that the last group is the largest. However still, some respondents did not know projects but knew what LOD is. The smallest group are respondents who knew the projects but did not hear about LOD.

4. Conclusions

The results of the survey allow the following conclusions: 36% of librarians, archivists, and museum employees in Poland are aware of LOD – to estimate whether these numbers are large or small, we should have some comparative data from other countries or other audience groups. The biggest group among them works in Polish research librarians, more than 50% of them are aware of the existence of LOD. Moreover, the most aware of LOD are those with PhD degrees (more than 80% of research librarians). There are not many respondents (53 persons) who know about the 5-star OD schema (13%).

In terms of familiarity with Polish and foreign projects using LOD technology, foreign projects are a little more known than Polish ones, and the most recognised foreign projects are those run by Europeana and the British Library.

The results of the correlation between knowledge of the project and knowledge of the LOD technology can be commented on by saying that knowledge of the technology does not always go parallelly with the knowledge that the project uses such technology. It is also not certain that knowledge of the project itself automatically determines knowledge of the use of that technology. This may be due to the lack of such information, at least on the websites of these projects and a few publications on this topic in the Polish literature so far. This can be confirmed by the case of PPM, which is the most recognizable among the respondents and has a large list of publications promoting the project. Correlated to this conclusion is a question for further analysis: *Do they understand the LOD properly?*

The analysis of the projects indicated by the respondents in question 6 (see Appendix 1) also brings some conclusions. First of all, most LOD projects are conducted by research libraries (for example, Bridge of Data, PPM, Platform of Digital Exhibitions), and thus they mainly provide scientific information. The second conclusion is that there is no cooperation between different kinds of LAM sector in Poland (all of the examples are library projects and there is no cooperation in this area between libraries, museums, and archives). Perhaps the functioning of the Kronik@ programme, which assumes the possibility of searching both scientific and cultural resources with one search engine, will contribute to changing this situation.

5. Discussion

This pilot study indicated little knowledge of the LOD issue among survey respondents. A larger group of respondents from museums and archives should be represented in the target study.

As mentioned above, while there are many publications on LOD in the LAM sector, we still know little about the level of awareness of this issue among the LAM employees. It would be interesting to compare the results of the Polish survey with a similar research conducted in other countries. It can be debatable whether knowledge of issues related to the development of the Semantic Web is desirable in the LAM sector, but it seems that if libraries, archives, and museums want to follow the development of society and serve it with their offerings, the answer to this question should be positive. In this context, it would also be interesting to investigate whether there is a relation between knowing LOD and Web 2.0 or Web 3.0 issues. A relevant question could appear in the target research.

Finally, emphasis must be placed on the fact that it is very difficult to find projects using LOD technology on the Web. Most probably there are more of them in Poland; perhaps they are run not only by libraries, but for some reason they remain unnoticed. It is worth adding here that if the data stored in such projects are really to be used for the development of the Semantic Web and data reuse, it would be worth talking about them loudly. A case in point is PPM, which, with its impressive number of publications of various types and conference presentations (see *O projekcie*, n.d.), stands out strongly from other projects in terms of the number of people who recognise the resource (compare Tab. 2).

Appendix 1 Questionnaire of a survey conducted between 8–25 of January 2021 among Polish librarians, archivists, and museum employees (English translation by the author).

Linked Open Data in the consciousness of Polish employees of cultural institutions

Ladies and Gentlemen,
Your anonymous participation in a survey on Linked Open Data (LOD) in the projects of Polish cultural institutions (libraries, museums, and archives) will allow me to investigate whether this topic is recognised in the community.
The results will be used to prepare a paper for an international scientific conference.
Thank you very much for your time!
Dr Dorota Siwecka
Institute of Information Science and Library Science
University of Wroclaw
e-mail: dorota.siwecka@uwr.edu.pl

Introduction – Cultural institution projects

(1) What Polish projects/resources have you heard of and how do you assess your awareness of them?

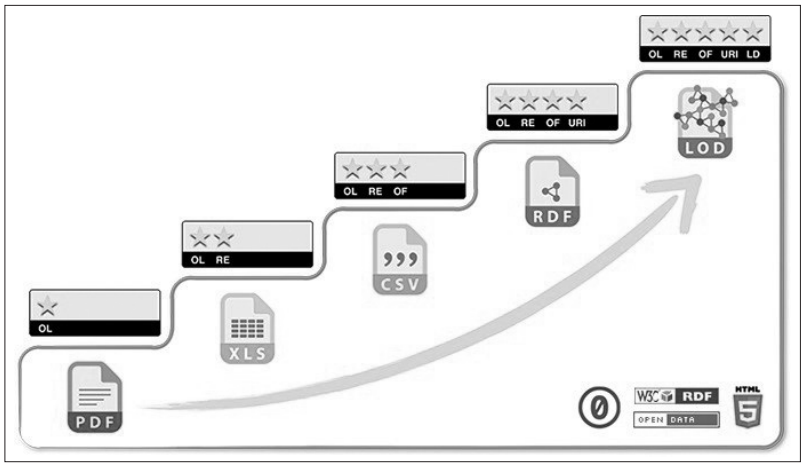
	I know the project/resource	I have heard about the project/resource but do not know much about it	I do not know the project/resource
Search the Archives (szukajwarchiwach.gov.pl)			
Europeana			
NUKAT Catalog			
Leopoldina Online (University of Wrocław)			
Bridge of Knowledge (Gdansk University of Technology)			
OMNIS (National Library)			
Open Resources in the Digital Repository of the Research Institutes			
Polish Medical Platform			
WorldCat			

Linked Open Data

Linked Open Data (LOD) is a global project to link data on the Internet. To make this possible, the people and institutions responsible for creating the data that ends up on the Internet need to take care of two things:
1) to relate data to other information on the Web in a way that is understandable not only to humans but also to computers (by the Resource Description Framework, RDF);
2) to make data open, that is, to make them available under an open license so that there is no doubt about their usability.

(1) Have you come across the term Linked Open Data so far?
   a. Yes
   b. Not

(2) Have you so far encountered Tim Berners-Lee's 5-star open data scheme, as illustrated in the graphic below?



Source: https://5stardata.info/en/

   a. Yes
   b. Not

Linked Open Data – information sources

(1) Have you come across the term Linked Open Data (LOD) in the following sources?

	Yes	No
the professional literature (e.g. "Bibliotekarz" [The Librarian], "Poradnik Bibliotekarza" [The Librarian's Guide])		
the scholarly literature (e.g. scientific journal, conference proceedings, books – also in electronic form)		
non-scientific materials available on the Web		
during the conference		
from colleagues in the field		

(2) If you have not found a suitable source of information on LOD in the above question, please provide it below.
   a. _____

Polish LOD projects

(1) If you are aware of any Polish projects using LOD technology, please provide information that will help me identify the project (e.g., name of the project, information about institutions implementing the project, or a website with the project description).
   a. _____

Foreign LOD projects

(1) Are you aware of any projects using LOD technology in foreign libraries?
   a. Yes
   b. Not
(2) What foreign library LOD projects are you familiar with? (you can select more than one answer)
   a. data.bnf.fr (French National Library project)
   b. datos.bne.es (Spanish National Library project)
   c. bnb.data.bl.uk (British Library project)
   d. pro.europeana.eu/page/linked-open-data (Europeana project)
   e. none of the above
   f. Another answer _____

Metrics

(1) Gender
   a. Female
   b. Male
(2) Age
   a. _____
(3) Education
   a. Basic vocational
   b. Averages
   c. Bachelor's degree
   d. Master's degree and/or engineer
   e. Ph.D.
   f. Post-Doctoral
   g. Another answer _____
(4) I work in
   a. School library
   b. Municipal/city/county library
   c. Regional Library
   d. Research library in a higher education institution
   e. Another research library
   f. Pedagogical library
   g. Archive

h. Museum
i. Other _____

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Linked Open Data w świadomości polskich pracowników bibliotek, archiwów i muzeów. Wyniki sondażu – badania pilotażowe

Abstrakt

Cel/Teza: Celem artykułu jest przedstawienie wyników ankiety przeprowadzonej w styczniu 2021 r. wśród pracowników polskich bibliotek, muzeów i archiwów, badającej ich świadomość w zakresie technologii open linked data.

Koncepcja/Metody badań: Do badania wykorzystano metodę anonimowej ankiety.

Wyniki i wnioski: Na podstawie uzyskanych odpowiedzi można stwierdzić, że zagadnienie Linked Open Data nie jest jeszcze zbyt popularne wśród pracowników polskich bibliotek, muzeów i archiwów. Najbardziej świadome istnienia technologii pozwalających na maszynowe rozumienie treści udostępnianych w sieci są osoby z tytułem doktora pracujące w bibliotekach naukowych. Ponadto znajomość projektów wykorzystujących technologie LOD nie koreluje ze znajomością istnienia takich rozwiązań technologicznych.

Ograniczenia badawcze: W badaniu wzięło udział 415 respondentów, co stanowi 1% wszystkich osób zatrudnionych na danych stanowiskach w Polsce (na podstawie GUS). Nie jest to duża liczba, ale ze względu na jej zróżnicowanie można ją uznać za reprezentatywną.
Oryginalność/Wartość poznawcza: Badanie świadomości Linked Open Data wśród pracowników polskich bibliotek, archiwów i muzeów nie było do tej pory przedmiotem żadnego opracowania. Zresztą tego typu badań brakuje również w innych krajach.

Słowa kluczowe

Ankieta. Archiwa. Biblioteki. Linked Open Data. Muzea.

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