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The Bridge of Knowledge – defining and implementing national Open Access policy by Polish universities. Gdansk University of Technology perspective

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Abstract:

The European Commission states that Open Access to scientific resources funded by the European Union shall facilitate the use of research results financed from the public funds. Moreover, it will cause an increase in the innovative capacity of Europe. The Open Access landscape is determined by several factors such as mandates. The open mandate may be voluntary or mandatory and implemented at the institutional, national or international level. It requires scholars to use open repository to deposit results of scientific research financed from public resources. The current paper addresses the role of European Commission guidelines regarding dissemination of scientific results financed by the European Union budget together with recommendations at the national level for Polish universities.

The process of preparing and implementing Open Access policy at the institutional level and the role of libraries in this process were presented on the example of Gdańsk University of Technology. Gdańsk University of Technology implements a project called Multidisciplinary Open System Transferring Knowledge. The acronym of its name in the Polish language is "MOST Wiedzy", which means "the bridge of knowledge". The result of this project is a platform of the same name, whose aim is to provide free access to the resources created and gathered at the University. The objective of the platform is to promote widely the research and educational potential of the University. It will also be a solution supporting communication tool between researchers and a platform for cooperation between science and business. The platform will be made available to other universities in the region of Pomerania in order to create common knowledge resources.

The paper also discusses the strategy of promoting Open Access and the repository within the university, in the scientific community of the Pomerania region and among entrepreneurs.

Keywords: Open Access, Open Science, institutional repository, Open Access policy

Policy development is of critical importance to the growing of open access awareness among the academic community around the globe. Creating such policies is often extremely difficult for individual research institutions. Many stakeholders such as libraries, academics, administrative and IT departments are involved in the process. Individual units often use solutions or guidelines provided by different contributors. The most important ones at the international level (for European Countries) are the recommendations of the European Commission (EC). The national level is usually represented by governmental recommendations. Although the origins of the Open Access (OA) movement dates back to the 1990s, the EC began its first official work on its implementation in 2006.

Open Access policies/mandates

OA policies or mandates could be simply divided to 1) voluntary and 2) mandatory. Voluntary mandate requests researchers to make their publications OA. Mandatory mandate requires researchers to make their publications OA.

On the principles of OA to scientific publications, policies should refer to OA definition from *Berlin Declaration* (Max Planck Society, 2003) and their conditions have to be met. Therefore, OA policies are quite hard to implement and thereby many policies allow much weaker conditions.

The Registry of Open Access Repository Material Archiving Policies (ROARMAP) provides an overview of registered policies in their different forms. As of August 2017, there were 871 policies that represent the very different level of openness. There are divided by policymaker type: funder, research organization, multiple research organization or sub-unit of research organization. Some of them concern for example only publicity of PhD thesis in institutional repository and not apply to all scientific output. There are only three registered policies from Poland (Adam Mickiewicz University, Interdisciplinary Centre for Mathematical and Computational Modelling (ICM) University of Warsaw and Polish Academy of Science Institute of Biochemistry and Biophysics). It has to be stressed that this data is incomplete due to lack of registration of all the mandates (Wałek, 2013). It is worth mentioning that this number has not been updated for several years (Szuflita, 2014). However, many universities have already provided OA mandates or are in the middle of working on appropriate regulations.

Nowadays, a relatively good amount of policies have been already adopted in European Countries. It does not mean, however, that OA has been fully achieved. Below is an overview of the most important initiatives related to the introduction of OA by the European

Commission to wider public circulation (The list is selected and the complete list of events can be found on the EC website).

European Commission and Open Access Chronology (selected)

- 2006 EC arranged the public consultation on the economic and technical evolution of the scientific publication markets in Europe (European Commission, 2006); in December, the European Research Council (ERC) realised the *Scientific Council Statement on open access* that highlighted the importance of public access to research results. This statement stressed the role of OA repositories and creating the OA policies.
- 2007 In February, the EC adopted the *Communication on Scientific information in the digital age: access, dissemination and preservation.* This document presented the changing role of scholarly communication and highlighted the new trends in dissemination scientific results. OA is strongly advised to publicly funded research (European Commission, 2007). In December, the European Commission published its first and significant *Guidelines for open access* (European Reserach Council, 2007). In the meantime, the COMMUNIA project from the Seventh Framework Programme (FP7) was launched. It was called: *Thematic Network on the Public Domain in the Digital Environments*.
- 2008 In March, the Presidency Conclusions has initiated updates to the *Lisbon Strategy for Growth and Jobs 2008-2010* where OA was mentioned and explained (European Commission, 2008). In August, the EC started the *Open Access Pilot in FP7*. The main goal was to make research results funded by the European Union free of charge and available for public use. In addition, several projects regarding OA such as: OAPEN (Open Access Publishing in European Network), PEER (Pilot Programme Investigating the Effect of the Deposit of Author Manuscripts on the Ecology of European Research and Publishing) or DRIVER II (Digital Repository Infrastructure Vision for European Research) were presented.
- 2009 In October, the first Report of the European Research Area Board called *Preparing Europe for a New Renaissance: A Strategic View of the European Research Area* was published (European Research Area Board, 2009). The report presented the assumptions for Europe called "ERA Milestones" where OA should be guaranteed to all outputs of public, non-military funded research.
- 2010 In May, the Europe 2020 Flagship Initiative Communication A Digital Agenda for Europe delivered OA in one of its section. Following this, they presented another Communication called Innovation Union in October. In addition, the 2nd Report of the European Research Board was revealed that introducing OA to all publicly funded projects and research outputs (European Research Area Board, 2010). Additionally, the one of the most significant projects from FP7 was introduced – OpenAIRE (Open Access Infrastructure for Research in Europe).
- 2011 In July, the European Commission launched the public consultation on scientific information in the digital age (report was published in January 2012). The questions in the questionnaire concerned the issues related to access to the scientific publications, research data, different models of OA (green and gold routs) and preservation of information. In November, the Commission presented its proposals regarding OA in new programme Horizon 2020. In December, the Report on *National open access and preservation policies in Europe Analysis of a questionnaire to the*

European Research Area Committee was published. It was highlighted that OA at research institutions is growing, however the national projects and strategies are fragmented and not consistent (European Commission, 2011).

- 2012 In January, the Commission published report on the online survey on scientific information in the digital age (European Commission, 2012a) as well as results on survey on OA in FP7 regards projects that participated in *Open Access Pilot in FP7* (European Commission, 2012b). In July, the European Commission presented Communication *Towards better access to scientific information: Boosting the benefits of public investments in research* as well as formal *Recommendations on access to and preservation of scientific information* (European Commission, 2012c). Those documents introduced obligatory OA model for publications funded by Horizon 2020 projects. In additions, the Mediterranean Open Access Network (MEDOANET) was launched.
- 2013 In December, the Horizon 2020 with its OA policies regarding access to the scientific results was launched.
- 2014 In July, another public consultation regarding widely defined *Science 2.0*. The European Commission integrated several aspects such as OA, Open Research Data (ORD), science blogs or alternative reputation systems into the one concept and its policy. In parallel with ongoing consultation, two ground-breaking projects were introduced: FOSTER (Facilitate Open Science Training for European Research) and PASTEUR4OA (Open Access Policy Alignment Strategies for European Union Research).
- 2015 In October, the workshops on alternative models of OA were held. Presentations were divided into three separate sections: "the challenges for the European Commission, the pressures on researchers, funders and librarians that are caused by today's system of academic publishing and the resulting themes emerging from the alternative OA publishing models" (Digital Single Market, 2015).
- 2016 In February, the *Report Access to and preservation of scientific information in Europe* was published. This document included information about implementation of Commission recommendations related to open access and dissemination of scientific results. In April, the conference "Open Science from vison to action" was held in Amsterdam. It was resulted in publishing *Amsterdam call for Action on Open Science* document that encourages full open access to the scientific publications.

Polish context

In Poland, the bill called the *Open Public Resources Act* was presented at the end of 2012. This document was to introduce public access to all scientific and cultural materials that were funded by public money. Unfortunately, this bill was not passed due to several circumstance such as lack of consistent strategy of its promotion. In July 2013, the Bureau of the Conference of Rectors of Polish Academy of Science agreed to present and adopt the principles of OA to scientific materials by academic community at their institutions. Rectors from many universities jointly expressed their support of the European Commission's recommendations on OA. However, no deceive steps were made in this respect.

One of the first projects implemented in Poland in terms of OA and funded by Polish Ministry of Science and Higher Education, was Springer Open Choice dated in 2010. This programme is updated every year and allows Polish scientist to publish their articles in Springer's selected journals in Gold model. The Article Processing Charge (APC) is covered by Ministry agreement with Publisher.

In January 2012, Ministry of Science and Higher Education started to work on the expertise on implementation and promotion of OA to scientific and educational publications. They wanted to analyse the unique models from financial, legal and technological points of view across several countries. The findings were supposed to help implement OA in Poland. Despite the fact that legislative work and public consultation lasted several years, no legal act was published.

Since the European Commission pressed on introduction OA policies in European countries, in 2015 Polish Ministry of Science and Higher Education published a document that established the direction of development OA to publication and research in Poland (MNiSW, 2015). The focus of the recommendations presented in this document is on OA policies that should be introduced by universities and research institutions. The Ministry did not intend to create one national mandate. All institutions should be responsible for taking action by themselves and no financial support will be provided. The Ministry encourages both OA routes – green and gold, however, the main emphasis is on self-archiving scientific output in repositories. Polish institutions were strongly advised to invest in developing infrastructures (such as repositories) and creating a community strategy for opening up scientific results. Further on, the Ministry suggests that open access policy should apply to:

- Peer-reviewed publications indexed by Journals Citations Report (JCR) database;
- Peer-reviewed publications from Polish list B (publications from Polish journals that have passed the evaluation process);
- Peer-reviewed publications from list C (publications indexed by ERIH database);
- Peer-reviewed publications that are not mentioned above;
- National and international conference proceedings co-funded by public money;
- Books and chapters;
- PhD thesis.

In addition, the Ministry recommends to cover ORD policies to maximise the openness of scientific research.

Based on this principles, Polish institutions have been given two years to introduce relevant standards and policies in their units. It should be noted that the deadline is the end of 2017.

Institutional Repositories in Poland

According to OpenDOAR (Directory of Open Access Repositories) (OpenDOAR, 2017), that registers not only institutional repositories but digital libraries as well, there are 92 repositories in Poland. It has to be stressed that most of them are digital libraries which do not meet the criteria for institutional repositories.

In May 2017, the Gdansk University of Technology conducted a phone survey on OA policies at institutional repositories at public universities in Poland. The study reached 22 public universities, 21 technical universities and 11 medical universities. Overall, the study involved 54 universities. Among them, 18 units sat up institutional repository, 11 which operate at universities and 7 at technical universities. None of the medical universities have established repository so far. The data collected through this survey produced an interesting material for analysis that will be explored in the future. In summary, none of the mentioned units have an OA mandate.

The list of public universities was based on the Polish best university ranking published by journal called "Perspektywy" which did not include the privet universities.

Open policy at Gdansk University of Technology

Since 2016, Gdansk University of Technology (GUT) has implemented the project called Multidisciplinary Open System Transferring Knowledge. The Polish acronym of this project is "MOST Wiedzy" that means "the bridge of knowledge". It is worth to mention that this innovative project is co-financed by the European Regional Development Fund within the Operational Programme Digital Poland for the years 2014-2020. Fig.1 presents the official logotype of the project.



Fig.1 Logotype of the project.

The main goals of the project includes:

- Integrating data from many different databases through one platform;
- Creating OA repository for scientific outputs;
- Offering multidisciplinary and multi-subjects services for academic, business and public community.

While working on the OA policy, most of the recommendations from Polish Ministry of Science and Higher Education and European Commissions were taken into consideration. The purpose of the policy is to provide a coherent framework and guide for all researchers and students providing adequate information on how to deposit their publications and make them open to the public. Regarding project features, all scientific outputs written by the GUT's employees, some publications written by PhD students and degree students will be stored in the "MOST Wiedzy" Repository. To realize such assumptions, a lot of changes in the existing GUT's legislation had to be made. It was very important to prepare adequate and appropriate legislative documents that could put into force new Rector's ordinances regarding dissemination scientific results. The newly formed team took the position that disseminating research results of the GUT's academic staff and archiving doctoral dissertations in the repository should be obligatory. Additionally, it was decided that the Open Access policy at GUT will be of depository character. The Repository will host a wide variety of research output types such as articles, working papers, monographs, PhD thesis, dissertations and conference proceedings.

A particular aim of GUT's OA policy is to address the following issues:

- Green route by self-archiving as required route;
- Gold route through publication in OA journals if possible;
- Content type covered;
- Permissions (Copyrights issues);

- Embargos ("dark deposit" the publication will be available after embargo ends or if any other legal objections will be ceased);
- Licensing (Open licenses, Creative Commons licenses).

In addition, the "Most Wiedzy" Repository will have several other functions such as:

- Providing bibliometric analysis;
- Providing Multisearch engine that integrates different databases;
- Providing platform that connects business and science.

The role of the University Library

The Gdansk University of Technology Library is responsible for the long-term preservation of scientific output produced under the auspices of GUT. According to the new Rector's Ordinance that will be published in September 2017, the Director of GUT Library will be responsible for adopting and implementing OA policy at the university.

Regarding several steps that needed to be made by academic staff to deposit publication in the repository, the Library has already formed a Library Repository Services (LRS) Team. It has to be mentioned that due to the administrative structure of the university, the initial phase of depositing the documents will be supervised by the Department of Scientific Matters (DSM). This unit is responsible for research output registration and data transfer to the national POLON system that is supported by Ministry of Science and Higher Education. Additionally, DSM team is obliged to verify and validate the metadata and bibliometric analyse. In the process of document depositing, the Library's team main role is to check for publishers' policy, files formatting and editing.

A lot of attention and effort will be also needed to promote the repository among the academic community. The adoption of the institutional repository by academic staff might be a slow proces due to several concerns such as lack of knowledge or retaining copyrights. Regarding these issues, the promotion strategy will be developed. The Library staff will be continuously instructing the members of the faculty by means of presentations, trainings and workshops. Faculty members and students should be aware of their responsibilities and obligations in sharing their papers. The promotional materials such as flyers will be created and distributed at the university. We are planning to engage the academic staff in the discussion about trends in the scholarly communication systems and the potential of Open Science for the scientific community. The range of activities that help us to facilitate more open approach to disseminating and sharing research results will include organizing the Open Access Week this year. In order to implement the value of OA into the academic life, we strongly believe that initiated efforts will help lead the project to true success.

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