OPEN ACCESS AT ROMANIAN UNIVERSITIES: BENEFITS AND CHALLENGES

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Abstract: *This article will first of all draw on the potential of open access for science and research. In the next step, it will provide information on the institutional attempts to put open access into practice in Romania through policies on digitised content and research, as well as through projects. Then, it will discuss the problems the implementation of the concept raises in Romania. Finally, some suggestions for further research and actions concerning a successful implementation of the open access concept in Romania will be made.*

Key words: *Romania, open access, scholarly communication, science commons, politics of knowledge.*

1. Introduction

The publication market is undergoing major changes: The traditional publication model with academic journals making research results available to the public only by charging subscription fees is being replaced by alternative publication models. The need for new publication structures is due to the so-called journals' crisis: University libraries have had to cancel subscriptions to scientific research journals because their allocated budgets have shrunk and because, parallel to that, the prices for these journals have grown (White & Claire 2007, 17f).

A viable solution for combating the journals crisis was offered by researchers and their academic communities: Researchers began to use software instruments and systems capable of monitoring all publishing stages from the acceptance of the manuscript to its printing, thus creating their own communication platforms to which their communities have unrestricted and free access. This is the way the alternative open access publication model came into life (Seidenfaden 2005, 26-32).

One of the first public requests for free and open access to scientific information launched in February 2002 within the Budapest Open Access Initiative defines the concept of open access as follows:

> By 'open access' to ... literature, we mean its free availability on the public Internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the Internet itself (Budapest Open Access Initiative, 2002).

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2. The Potential of Open Access

In the case of traditional journals, the publication process encompasses many months from the passing in of the manuscript to its actual publication. Open access quickens the communication of new scholarly results since these results can be made public at a key stroke (Bell et al, 2007). Thus, compared to traditional publishing models, the open access publication model has great potential for science and research, not only by granting free and fast access to scholarly information: Since reading patterns is slowly changing and the aspect of comfort and easiness begins to play a major role (Mark Ware Ltd., 2006), the open access model is also convenient and comfortable in this aspect.

Comparing open access and non-open access articles between 1992 and 2003 in 10 disciplines, researchers ascertained that open access articles have consistently more citations, the advantage varying from 25 per cent - 250 per cent by discipline and year. These studies highlight a welcoming aspect of personal benefit to the authors who submit their work for open access, since this indicates that providing open access to one's own work is not merely an act that benefits others, justified by the greater good only, but it also increases the scientist's visibility, audience and citations, benefiting the scientist's own career. Universities co-benefit from their researchers' increased impact, which also increases the return on the investment of the research funders, such as governments, and the tax-paying public (Hajjem et al, 2005).

Not only does open access increase the visibility, usage and impact of the researchers' own findings, but the power to find, access and use the findings of others increases as well. The motto "publish or perish" which dominates the academic world these days causes the number of new publications to grow constantly (Mark Ware Ltd., 2006). University libraries are, however, no longer able to guarantee a vast readership with current scholarly information because of the already mentioned high prices of the scholarly journals. Most universities and research institutions can only afford to subscribe to a fraction of the existing relevant journals in a field, all the articles being therefore accessible to only a fraction of their potential users. This, in turn, means that research has only a fraction of its potential usage and impact. Yet "science is to a great extent information processing: new things originate due to the study of other works, the exchange of ideas and the interdisciplinary networking. Any restriction of access to scholarly information hinders the production of new findings" (Sietmann, 2007, 11).

The open access databases brought forth by academic communities make genuine data accessible and preserve it in the long term. It is of great value to have data thoroughly understood and used by colleagues working in the same field, especially if the data involved is gained through great effort and cost, for example from satellites, global sensorial networks, experiments of great proportions, clinical studies or statistical analyses. The supporters of the concept of science commons claim that such databases can become much more than just servers containing scholarly articles: They can become crucial, enhanced science networks for scientists from all over the world, as already exist in the field of nuclear energy (Sietmann, 2007, 11).

3. Institutional Attempts of Putting Open Access into Practice in Romania

There have been several attempts by Romanian academic institutions to make academic digitised content available to the public: Thus, in 1999, the Romanian Academy, a cultural institution which has as its main objectives the cultivation of the national language and literature, research into major academic domains, and the promotion of democratic and ethical principles of free communication of ideas in Romanian sciences, arts and letters (Romanian Academy, 2006), started to digitise its collections (Rapeanu & Dovinca, 2006).

Through the DigiT-project the Central University Library "Lucian Blaga" in Cluj–Napoca also pursues the digitisation of the library's valuable collections (patrimonial documents, iconographic material, rare periodicals, etc.). The project aims to chronologically make available to the public publications of the Middle and the Modern Age (Rapeanu & Dovinca, 2006).

The Central University Library in Bucharest is also digitising valuable documents from its collections, as well as materials that are often circulating and are no longer under copyright law protection; the Central University Library in Bucharest also intends to create an institutional repository consisting of articles in the field of librarianship and information science which have been written by the employees of the library who are willing to give their agreement for electronic publishing (Rapeanu & Dovinca, 2006).

4. Challenges Concerning the Implementation of Open Access in Romania

4.1. Financial Issues

Though the very concept of open access removes certain price barriers, like subscription fees, or pay-per-view fees, implementing open access cannot be achieved free of costs: open access literature is free for readers but not free for publishers. As Suber (2007) argues, though, open access journals are economically more sustainable because the "costs of peer review, manuscript preparation, and open access dissemination are considerably lower than the prices we currently pay for subscription-based journals".

Open access archives are also economically sustainable since there are already many systems of open access software available with which to build and maintain archives. Besides, "depositing new articles takes only a few minutes, and is done by individual authors, not by archive managers. Open access archives require only a small part of a technician's time, primarily at the launch, and some server space. Universities already support less essential software and already give more server space to less essential content." (Suber, 2007).

4.2. Organisational Issues

While in the Directory of Open Access Repositories 157 journals can be identified for Germany for example, the Directory of Open Access Journals registers only 65 journals published in Romania (Directory of Open Access Journals, 2010, 2010a).

The low involvement of Romanian organisations in the open access movement is not only displayed by the low number of open access products in Romania but also by the low number of Romanian organisations supporting international initiatives advocating open access and by the absence of the open access policies from the websites of organisations concerned with science and research. It must be mentioned that only five Romanian organisations signed the Budapest Open Access Initiative in 2001

(Budapest Open Access Initiative, 2010) and that no Romanian organisation signed the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities in 2003 (Berlin Declaration on Open Access to Knowledge in the in the Sciences and Humanities, 2010). In the same context, SPARC Europe, „an alliance of European research libraries, library organisations and research institutions, ... [which provides] the support and tools it needs in order to bring about positive change to the system of scholarly communications", which actively features open access, has 14 members, Romania is, however, not one of them (SPARC Europe, 2010). Apart from this, nothing on the websites of important Romanian academic organisations directly concerned with science and research, such as the Romanian Academy, the National Council for Academic Research in Higher Education, and the National Authority for Academic Research, suggests that these organisations are concerned with the open access concept and open access policies (Romanian Academy 2006; National Authority for Academic Research 2005; National Council for Academic Research in Higher Education 2004).

Besides the 65 Romanian open access journals listed in the Directory of Open Access Journals (Directory of Open Access Journals, 2010), an internet search revealed another eight open access journals which are not listed in the Directory of Open Access Journals index, suggesting, thus, that in Romania there could be more non indexed open access journals. These journals are: The Magazine of the Germanists from Romania (*Zeitschrift der Germanisten Rumäniens*), the Quality of Life (*Calitatea Vietii*), Modern Military Spirit (*Spirit Militar Modern*), the Journal of Optoelectronics and Advanced Materials, the Journal of Ovonic Research, the Journal of Non-Oxide Glasses, the Digest Journal of Nanomaterials and Biostructures, and the Romanian Journal of Information Science and Technology.

Apart from that, Romania appears to have only one institutional repository which collates the academic results in Economics of the Transylvania University of Brasov (Directory of Open Access Repositories, 2010). An Internet search showed, however, that the Institute of Educational Sciences (*Institutul de Stiinte ale Educatiei*), a national institution of research and development in the field of education, possesses an archive with surveys, academic reports, documents and publications of the institute's members which are made accessible to the public as PDF documents (Institute of Educational Sciences, 2010). So does the Education 2000+-Center (*Centrul Educatia 2000+*), an NGO belonging to the Soros Open Network, which provides educational services and consultancy, and which possesses a repository consisting of publications and scholarly papers of the institutions' members (Education 2000+Center, 2010).

The fact that there are several open access-journals and institutional repositories which are not listed in international open access databases such as the Directory of Open Access Journals and the Directory of Open Access Repositories indicates not only that open access products have not been disseminated efficiently, but also that the significance of open access has not yet been grasped fully by the institutions offering open access products, since the very term "Open Access" requires a commitment to making open access publications available to as many people as possible.

As already shown in this article, there are several Romanian academic institutions which attempt to make digitised academic content available to the public: Most projects attempt, however, to make only

Romanian literature and culture of the past and past achievements available. Concerning the availability of digitised literature representing current research results, only the attempt of the Central University Library in Bucharest could be assessed. Besides, no strategy at all towards networking with Romanian scientists and researchers from other institutions in order to make current research results available to the public in an open access manner could be identified (Rapeanu & Dovinca, 2006).

4.3. Legal Issues

The Romanian research, development and innovation strategy for the period 2007-2013 is consistent with the main arguments specific to the political documents at European Union level: The view that the creation and use of knowledge has become a vital source for boosting global wealth is common to both Romania and the European Union. In this political context, both collaborative and competitive, excellence is viewed as having even more significance, and academics, universities and research institutes are seen as "extremely valuable, as they have the ability to attract resources and to influence both the academic environment and the socioeconomic systems" (National Authority for Academic Research, 2006, 7).

Concerning open access, the European Union has acknowledged the importance of access to and dissemination of scholarly information and launched a policy process on this issue, announcing a series of measures at European level and having started to explore issues of open access, dissemination and preservation of scholarly information through project funding. In January 2008 these measures culminated in the adoption of an open access mandate by the European Research

Council, an institution established by the European Commission which disburses about 7.5 billion euros a year, or 15 per cent of the European Union research budget for the Seventh Framework Programme for 2007-2013 (European Research Council, 2008): This mandate uses a six-month embargo, which applies to data files as well as peer-reviewed articles. Later in the year, the European Union adopted a second European Union-wide open access mandate for another 20 per cent (€10+ billion) of the Seventh Framework Programme for 2007-2013 research budget, as a pilot project. The project is the first open access mandate to experiment with different embargo periods for different fields (SPARC Open Access Newsletter, 2009). These measures are to be seen as promising signs that the European Union will continue to move towards open access mandates for 100 per cent of its publicly-funded research.

Romania, however, does not seem to have thoroughly reflected on or to be fully aware of the importance of open access to scholarly information and its dissemination, since neither the term open access nor the concept of free access to scholarly information are mentioned in the policy papers or on the websites of the political institutions of the country that are concerned with science and research. To date, Romania has not adopted any open access policies on research data. At the moment, the only obligation of, for instance the Romanian Academy grant recipients concerning research data is to make sure that publications or results stemming from projects funded through the Romanian Academy mention the support of the Academy (Romanian Academy, 2008).

On the way to becoming a European Union member, Romania had to adjust its policies to those of the European Union and to take over the Acquis

Communautaire (European Community, 2005). Following the lead of the European Union, which has signalled the importance of open access and has successfully launched a policy process on open access, one can assume that Romania will also bring its national policies into accord with the policies of the European Union on publicly funded research: Not only will Romania be required to commit to open access in future if it continues to participate in European Union-funded research programmes, but in time, it is likely that it will also adopt its own open access policies on publicly funded research.

4. Conclusions

The financial aspect concerning open access does not represent a real challenge for Romania since the costs of producing open access literature are lower than those of producing traditional print literature. Organisational and legal challenges are, however, more difficult to overcome. These challenges are: The low number of indexed open access journals; the low number of indexed open access repositories in Romania; the low involvement of Romanian organisations in international initiatives advocating open access and the absence of the term and the concept of open access, as well as of open access policies, from the websites of organisations directly concerned with science and research; the insufficient dissemination of open access products and projects, reflected in the existence of several open access journals and institutional repositories which are not listed in international indices; the lack of concern with open access displayed by political institutions; and the low concern with open access displayed by academic public institutions.

At present, no one can say if the reasons for the disinterest in open access lie in the lack of information concerning the open access concept, in the insufficient reflection on the importance of the free availability of research, or in the overwhelming power of the commercial publishing houses. Research done on these aspects is of great importance since it would help to explain this massive disinterest, and it would be also a necessary premise on the way to effectively combating the causes for this disinterest.

Thus, Romania's political institutions not only have to acknowledge current international developments on open access, but also have to react to these developments both by funding and leading research work on aspects of open access in order to be able to foresee the impact the newly implemented open access measures would have. Besides, they also have to start educational campaigns to overcome the low transparency on the featured issues. Apart from that, the Government should retain the copyright to articles based on government-funded research and license the resulting works to the public domain to ensure permanent open access, since it seems only right that the results of a project which comes from the public sphere and which has been funded with public money should become a public good.

Compared to traditional publishing models, open access can grant free, fast and convenient access to scholarly information, can increase the scientists' visibility, audience and citations, and set up virtual research cooperation networks of enormous scholarly potential. Academics are the first ones to profit from the open access publications and therefore the first ones one would expect to encourage the implementation of open access. It is of great importance that they urge their universities to create institutional archives, archive their papers themselves, and encourage their colleagues

to do the same. They should also compel university publishing houses to experiment with new business models that provide open access to the works that they publish.

The access to, the dissemination of, and the preservation of scholarly information are major challenges of the digital age. Success in each of these areas is of key importance for any information society and its research policies. And as Swan beautifully puts it: "A few minutes at the keyboard today makes one's work visible to any scientist who might build on it tomorrow." (Swan, 2007). We have the tools at hand, it is up to us to get involved in order to transform research communication.

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