

A new look at the university libraries in context

European Research Area

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Abstract: The role of university libraries in the European Research Area (ERA). Collecting, diffusion and exploitation of knowledge like the core of the research system are discussed. The paper presenting an access to knowledge by exploiting the potential of university libraries, the development of online libraries, repositories of scientific information and databases of publications. An examination of the role of university libraries in Poland in the process of the knowledge transfer, the main problem of scientific communication.

Keywords: university library, European Research Area, knowledge transfer, access to knowledge

1. Introduction

The challenges of developing a knowledge-based economy and knowledge society determine the scope of research. The most important elements of the strategy for the use of science, modern technologies and information society to accelerate the economic growth are the processes of knowledge development, namely scientific achievements, transmission of knowledge to the educational and training systems, dissemination of knowledge through modern information and communication technologies and application of knowledge in the process of innovation and technical progress. In this context, attention should be paid to Polish and EU strategic documents pertaining to scientific policy, scientific and technical policy, and development of the information society, including *Development and maintenance of information infrastructure and information technology infrastructure of science and its digital resources from 2006 to 2009* (dated 25 December 2005), *The strategy of development of science in Poland by 2013 and long-term forecast until 2020* (June 2005), *The assumptions of the scientific, scientific and technical, and innovative policies of the state by 2020* (adopted by the Council of Ministers on 14 December 2004), *Proposed directions of development of science and technologies in Poland until 2020* (programming document of the Minister of Science and Information Technology, November 2004) or *i2010 – European Information Society 2010* (25 May 2005).

2. Transfer knowledge

Research institutions defined as “all higher education institutions (irrespective of their name and status in the Member States, e.g. universities, colleges or polytechnics) and public research centres and organisations” [Communication, 2007] transfer knowledge. According to the European Commission’s communication *Improving knowledge transfer between research institutions and industry across Europe: embracing open innovation*, the transfer of knowledge is related to processes necessary to acquire, gather and transfer public and non-public knowledge, including skills and competencies, both in the area of commercial and non-commercial activities. A good example of this is co-operation on research, advice, licensing, establishment of spin-off companies, mobility of scientists, or publications. Knowledge transfer related

issues stem from the less systematic and professional management of knowledge and intellectual property by the European universities. According to the European Commission, factors which hinder the “knowledge transfer in European research institutions” include “differences between the business and science communities; lack of incentives; legal barriers; and fragmented markets for knowledge and technology” [Communication, 2007; Report, 2006].

The advancing globalisation of scientific research and technical progress determines actions of the European Union in this area. Establishment of the European Research Area (ERA) – this initiative was adopted at the Lisbon summit of the European Council in 2000 – is the need to undertake multiple steps, in particular to ensure cohesion of scientific and research programmes, as well as the scientific and research policy in Europe. The *Green Paper The European Research Area: New Perspectives* published in April 2007 distinguishes among three interconnected aspects related to the ERA: 1) the European internal market of scientific research, which supports unlimited movement of scientific staff, technologies and knowledge; 2) an effective co-ordination at the European level of national and regional actions and scientific and research programmes, as well as the proper policy; 3) initiatives implemented and financed at the European level [Green Paper, 2007]. Fulfilment of the European Research Area idea is connected to the need to undertake steps to ensure proper movement of qualified scientific staff, world-class scientific and research infrastructure, high-class research and scientific institutions functioning within co-operation between the public and private sectors and private-public companies, which constitute the main part of research and innovation clusters, the effective knowledge sharing, co-ordinated programmes and scientific-research priorities. Development of a vast scientific and research infrastructure, integrated and organised within the network, regular co-operation between scientific-research institutions and commercial companies, which is the basis for specialised, interdisciplinary scientific-research clusters utilising advanced information and communication technologies are the conditions for effective knowledge sharing. According to the *Green Paper*, it involves an “open and easy access to the public knowledge base; a simple and harmonised regime for Intellectual Property Rights, including a cost-efficient patenting system and shared principles for knowledge transfer and cooperation between public research and industry; innovative communication channels to give the public at large access to scientific knowledge, the means to discuss research agendas and the curiosity to learn more about science” [Green Paper, 2007].

Knowledge sharing in the scientific-research system is the basis for success in every discipline of science, that is why a reliable, inexpensive and permanent access to results of scientific research is essential, as well as wide dissemination thereof. According to the *Green Paper*, “In particular, access to knowledge generated by the public research base and its use by business and policymakers lie at the heart of the European Research Area, where knowledge must circulate without barriers throughout the whole society” [Green Paper, 2007]. ICT development and achievements resulted in creation of online libraries, repositories of scientific knowledge, and databases of publications which should be integrated. The system of publishing scientific information is of particular importance as it affects the level of scientific and research work. The new ERA dimension corresponding to the needs of the knowledge society

requires creation of new channels and innovative methods of communication.

In *Conclusions of the Council on the definition of a "2020 vision for the European research area* the Council of the European Union underlined that ERA was one of the most important elements of the Lisbon strategy for growth and development, and thus it was necessary to have it included in creation of the 'knowledge triangle' of research, innovation and education [*Conclusions*, 2009]. The Member States and the Commission prepared *2020 Vision for the ERA*, which provides that "by 2020, all players will fully benefit from the "fifth freedom" across the ERA: free circulation of researchers, knowledge and technology." [*Conclusions, ANNEX*, 2009].

This is promoted by properly operating high-quality research infrastructures which serve advanced scientific research. In 2006 the European Strategic Forum on Research Infrastructures (ESFRI) prepared the roadmap for the construction of new and upgrade of existing pan-European scientific-research infrastructures, including development of electronic infrastructures in Europe and worldwide, which integrate data repositories or grid technologies. Investments in e-infrastructures are of particular importance, as evidenced in the *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - ICT infrastructures for e-science*. This document highlights the strategic role of the ICT infrastructures in the context of faster development of e-science, e-science grids, and data infrastructures [*Communication*, 2009].

With ICT, scientists are able to participate in the global scientific communication, co-operate with multiple research teams, and utilise experience of other scientists more effectively in the virtual research environments. Development of the ecosystem of European digital repositories in the process of connecting national repositories and discipline-specific repositories will improve access to scientific information. Science utilises growing amounts of data, therefore particular care should be paid to availability, quality and storage of the most important datasets. It is also important – based on experience of the largest scientific organisations, universities and libraries – to develop a new strategy of scientific information management in the digital environment, among others, according to guidelines of *Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee on scientific information in the digital age: access, dissemination and preservation* [2007 a], and *Commission Recommendation of 10 April 2008 on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organizations* [*Commission Recommendation*, 2008].

The potential of European universities is immense, yet it is not fully and effectively utilised to enhance competitiveness and development of knowledge society. The programme of university modernisation to increase competitiveness of Europe in the global knowledge economy involves a number of changes. The Commission suggests that the following changes will be key to success:

- Break down the barriers around universities in Europe
- Ensure real autonomy and accountability for universities
- Provide incentives for structured partnerships with the business

community

- Enhance interdisciplinarity and transdisciplinarity
- Activate knowledge through interaction with society [*Communication*, 2006].

While pursuing partnership with the business circles, universities create opportunities for improved transfer of knowledge, which boosts entrepreneurship in the region. In this direction, universities have to implement certain organisational changes and develop basics of entrepreneurship and management skills, for example by creating local clusters for knowledge creation and transfer, databases, joint offices of scientific research or knowledge transfer. Shaping the entrepreneurship in the university circles should be an element of academic education. In this context, communication with society is of utmost importance, “a broad communication strategy based on conferences, open door operations, placements, discussion forums, structured dialogues with alumni and citizens in general and with local/regional players” [*Communication*, 2006].

3. University libraries for knowledge, creativity and innovation

Transfer of university knowledge to society requires wider information on the importance of research. University libraries also participate in these actions for the economy and knowledge society. Such institutions should take wider participation in interaction with the external world, by opening informational and training programmes for society. However, since libraries are university structures, they require restructurisation and modernisation, just as universities do.

Contemporary university libraries are not perceived as a space to acquire and create new knowledge but as points of access to information. These institutions do not represent the place mentioned by Michel Foucault in *L'archéologie du savoir* (The Archaeology of Knowledge): “To Foucault, the library was not merely inert or non-affective storage, but a place where the texts themselves were actively re-interpreted. Librarians make decisions every day which influence these re-interpretations of the texts. They catalogue, shelve and disseminate information according to a predetermined, precise and universal structure so as to make information easily accessible. [...]Foucault argued that libraries are not merely voids where information is held, but are also places where new knowledge is born.” [Pierre, 2005].

The position of libraries and librarians in the contemporary system of science is manifested by the performance of the technical assistance function. As a result of creation of the knowledge society, the 21st university libraries face the need to develop new epistemology and ontology, as Peter Pierre says: “As a professional group, librarians need to work together to find a new ideology from which to develop a response to the erosion of the very raison d'être of the libraries existence.” [Pierre, 2005]. Implementation of a new, knowledge-based paradigm requires enhancement of the “knowledge triangle” of education, scientific research and innovativeness. University libraries and librarians should play a major role in all the three fields and help the universities to make a full contribution to the Lisbon Strategy. Such actions require the libraries to fully participate in the scientific communication and help scientists from various institutions to solve problems together. The rapid development of the ICT has clearly stimulated the growth of the information society, primarily by

propagation of access to fast communication. We can see encountering and convergence of networks and services, thus “the digital convergence of information society and media services, networks and devices is finally becoming an everyday reality: ICT will become smarter, smaller, safer, faster, always connected and easier to use, with content moving to three-dimensional multimedia formats.” [Communication, 2005] Development and expansion of ICT applications affects standards of life, transforms organisation of enterprises and transforms the society as a whole. The growth pace of the technological progress over the recent years and the common use of information and communication technologies have changed the working style of university libraries and communication within the university and communication with its environment. Access to multimedia resources is provided by means of new, diversified formats, at any time and to any place, customised to the needs or requirements of individual users. The apparent digital convergence in the field of communication networks, media, content, services and devices transforms university structures – through creation of better networks, new compression techniques, faster distribution channels, new formats of content and services – and it also affects communication with the business environment by providing conditions for more effective knowledge sharing.

4. Conclusions

The ICT has stimulated development of the function of a virtual library, being an agent in provision of online information and documents, an increase in the role of libraries as an agent in exchange of information within the university, a growth in purchase of electronic publications [Campbell, 2004; Neal, 1996]. We have seen an apparent change in perception of the library as the centre for testing and disseminating new technologies. In addition, university libraries should become actively involved in management of the intellectual property and the transfer of knowledge.

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