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Content analysis of European library and information science journals

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Abstract. Content analysis of 28 library and information science journals of the leading European countries have been conducted in the context of the current research. The thematic focus of these journals has been the priority of the research. Several thematic groups of library and information science journals have been identified. They include the journals that cover the following topics related to: 1) digital information; 2) development of information and communication technologies and their application in library practice; 3) library and information with the key topic of library and information management; 4) various types of communication. The conclusion has been made that scholarly interdisciplinary communication is expanding in the context of information society development. The analysis provides means for taking into account the trends in the leading European countries that help to evaluate and compare the performance of Ukrainian libraries and increase the level of professional knowledge and communication of library and information science professionals.

Keywords. Library and information science journals, content analysis, thematic focus, professional communication.

Introduction

The present professional communication of library and information science specialists is structurally formed by various components, traditional and electronic forms and methods of professional engagement and interaction, print and electronic journals. The field-oriented periodicals are claimed to be a key channel of professional communication. They maintain a stable system of information circulation within each community and provide feedback from and to society. The content of professional journals in particular reflects the main trends in the development of library and information science. Consequently, research of the content of European library and information science journals as a channel of professional communication proves to be important and effective.

Literature review

The variety of topics related to new trends in the development of journals as a fast channel of dissemination and acquisition of scientific knowledge have been studied by a considerable number of scientists from different countries. Ukrainian library and information science researchers and practitioners L. Beilis [17], O. Kobelev [18-21], S. Maslovska [22], S. Nazarovets [23], O. Pastushenko [24], V. Soshynska [25], O. Voskoboinikova-Guzeva [26], T. Yaroshenko [27] mostly focus on studying the Ukrainian segment of library and

information science journals. The works of foreign researchers K. Blessinger [2], C. H. Davis [3], J. Nicolaisen [8], J. Nixon [9], S-C. J. Sin [11] form the theoretical foundation for the study of European library and information science journals as a channel of professional communication.

With a view to determine the trends and strategies of library and information science field development in individual countries and globally it is essential to study the thematic structure of core European library and information science journals. That is why doing research on the publications that focus on the thematic analysis of library and information science journals is of primary importance. Specifically, O. Tuomaala, K. Jarvelin, and P. Vakkari carried out the content analysis of articles published in core library and information science journals during the 1965-2005 period [12]. Another group of researchers refined the cognitive structure of the library and information science field based on the conducted analysis of keywords and titles of articles published in 16 library and information science journals during the 1988-2007 period [7].

Australian scholar M. Rochester and Finnish scholar P. Vakkari [10] made a significant contribution by generalizing the topics of research articles published in particular countries and in particular time. The research trends in library and information science were described by comparing the distribution of topics, subtopics, approaches and methods in national studies of Australia, China, Finland, Spain, Turkey and the UK. Scientists identified three most popular topics in research articles in the mentioned above field during the 1965-1995 period. They are:

- information storage and retrieval (the UK, Spain, Turkey, Finland);
- library and information services (Austria, the UK, Spain, China, Turkey, Finland);
- information seeking (Australia, the UK, Turkey, Finland).

These data indicate common trends in the library and information science field in the UK, Turkey and Finland. The comparison provided means for presenting the evolution of topics connected to the development of the field.

A considerable number of research by foreign authors is focused on studying the content of particular journals. Among them are: Bibliometric analysis of Electronic Library Journal (2000–2010) [5], the content analysis of articles in three journals (1998–2008): JASIST, IPM, JOD [13]. Based on the analysis of keywords and abstracts in the top 10 library and information science journals N. Aharony defined the following main trends: the bases of Library and Information Science, information technologies, methodology, organization and acquisition of data, economics and management, information ethics and law, user behavior, dissemination of information and social information science [1]. Therefore, the thematic focus of Library and Information Science journals is directed at revealing the priorities and future development of the library and information science field.

Multidisciplinary approaches to library and information science problems are clarified by D. Williams [15]. Among the main areas of focus of library and information science the author identifies psychoanalytics as a complex tool for libraries that help to uphold their position in society; cooperation between libraries themselves and also between libraries and other information institutions; meeting the needs of modern's society; social media; library profession promotion; changes in information behavior.

The works of O. Kobelev [18-21] are of great value for the research of library and information science journals of the leading European countries as an effective channel of professional communication. He offers to consider bibliometry as a quantitative method of the documentary level, informometry as a quantitative method of the information level, cognitive science as a promising method of quantitative analysis of knowledge related to the cognitive

level of social communications, and scientometry as a special quantitative method that combines data that "supply" the three methods with their own specific indicators [20]. Another researcher also draws attention to their common features and diversities [16].

The lack of the current analysis of the thematic focus of the leading European library and information science journals makes the research relevant and important.

Methodology

Analysis of the recent research and publications made it possible to choose the method of the current research. The content analysis method has been used to study the thematic content of European library and information science journals. Use of content analysis allows to obtain data that help to identify the general trends and future development of library and information science, education and practice in European countries.

It should be pointed out that the methods and criteria for the selection of journals for the content analysis vary a lot. Some authors [4, 6] select journals for their research that are indexed by the Library Literature and Information Science database, LISA and the Social Sciences Citation Index (Web of Science). Most commonly, researchers exclude the journals that are published outside North America and Europe from the list [4]. Others use the lists of journals from other studies or make the selections using Journal Citation Reports [14].

Taking into account the experience of other researches the following criteria to study the content of European Library and Information Science journals have been chosen:

- the journal should be indexed by both Web of Science and SciVerse Scopus international scientometric databases;
- the journal should be in the library and information science category;
- the journal's publisher should be from one of the European countries (Great Britain, the Netherlands, Germany or France);
- the thematic direction of the journal;

The JITA (Classification Scheme of Library and Information Science) scheme has been used to identify the thematic structure of library and information science journals of the leading European countries.

Findings

28 library and information science journals that met the above mentioned criteria have been selected for further research. Among them are: 22 journals that are published in Great Britain, 2 journals – in the Netherlands and 4 journals – in Germany. Content analysis of these journals has been carried out on the basis of thematic sections of each journal, abstracts and keywords of published articles. The websites of the selected journals have been visited and analyzed. The validation of data has been made in correspondence with the journals' editors.

Several thematic groups of European library and information science journals have been identified according to the JITA schema.

The journals that cover topics related to digital information have been included into the first thematic group (Figure 1).

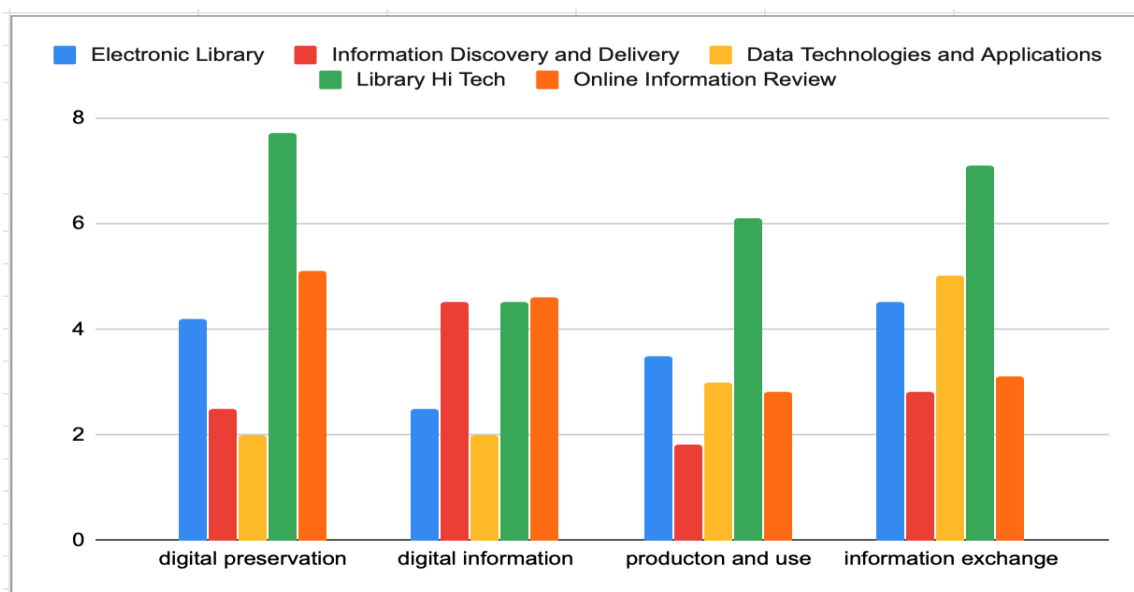


Figure 1. The "digital information" thematic group

Electronic Library (ISSN 0264047), *Information Discovery and Delivery* (renamed from *Interlending & Document Supply*) (ISSN 02641615), *Data Technologies and Applications* (renamed from *Program: Electronic Library and Information Systems*) (ISSN 00330337), *Library Hi Tech* (ISSN 07378831), *Online Information Review* (ISSN 14684527, 14684535) are particularly interested in publishing the following topics: digital information organization; digital archiving; digital information creation, discovery, access, and exchange; e-science and data science; digital scholarship and production and use of scholarly content etc. The data obtained show that articles on creation, curation, representation, storage, retrieval, analysis and use of digital information are frequently published in the *Library Hi Tech* journal.

The common topics worth mentioning that are published in the above mentioned journals are: digital information resources management in different organizations, particularly in libraries; information analysis; social media interaction and analysis. The thematic topics that vary from journal to journal are the following: digital information exchange and sharing within and between libraries (*Information Discovery and Deliver*); dealing with large volumes of data with novel processing techniques and sharing of data using the Web of Data/Linked Data approach (*Data Technologies and Applications*); online communities, social networking and social media, including online political communication; crowd-sourcing; positive computing and well-being (*Online Information Review*).

Article analysis of a particular journal provides specific information on its topics. For example, *Electronic Library* covers the topics on scholarly communication, digital 'life' and big data etc.

The second thematic group of library and information science journals combines the journals where the topics are related to the development of information and communication technologies and their application in library practice (Figure 2). Knowledge management and the learning organization; using information technology to develop knowledge management; open access; ethical, social and political questions associated with the adoption, use, and development of information and communication technology; professional development of specialists and users in the field of information and communication technology; data protection and copyright; mobile applications and others are the topics covered in these journals.

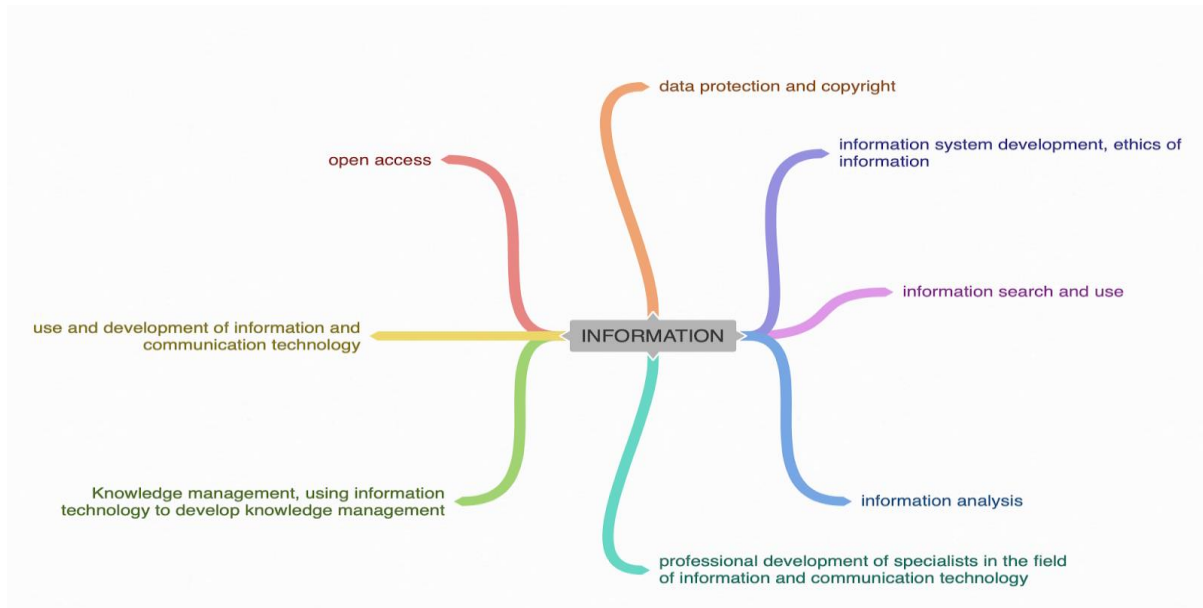


Figure 2. The topics of library and information science journals that focus on the development of information and communication technologies

Health Information and Libraries Journal (ISSN 14711842, 14711834), *Journal of Knowledge Management* (ISSN 1367-3270), *Journal of Librarianship and Information Sciences* (ISSN 09610006), *Ethics and Information Technology* (ISSN 13881957) have been set to the second thematic group.

It should be noted that *Health Information and Libraries Journal* is an international journal of interdisciplinary interest to practitioners, researchers, and students in the library and health sectors. It is the official journal of the Health Libraries Group of the UK Chartered Institute of library and information professionals. The journal's scope comprises the topics on (but not limited to) bibliometric studies of a specific health topic or geographic region; educating and training health library and information workers etc. *Journal of Knowledge Management* as contrasted with *Health Information and Libraries Journal* focuses on information organization and retrieval technologies for improving the quality of knowledge. *Journal of Librarianship and Information Sciences* being an academic journal publishes the papers from practicing librarians, information workers and academics which reflect all aspects of librarianship and information science. Another journal of this thematic group *Ethics and Information Technology* is the only journal where information technology is viewed from a social and ethical perspective.

The third thematic group includes the journals with the focus on library and information and where library and information management is a key topic (Table 1.). These are the following journals: *Restaurator – International Journal for Preservation of Library and Archival Material* (ISSN 00345806), *Library Management* (ISSN 01435124), *Libri* (ISSN 00242667), *Information and Organization* (ISSN 14717727), *Journal of Information Technology* (ISSN 02683962, 14664437), *Knowledge Management Research and Practice* (ISSN 14778246, 14778238), *Library Collections, Acquisition and Technical Services* (ISSN 18731821, 14649055), *Aslib Journal of Information Management* (ISSN 20503814, 20503806), *European Journal of Information Systems* (ISSN 0960085X, 14769344), *Information Processing and Management* (ISSN 03064573), *Information Research* (ISSN

13681613), *Information Technology and People* (ISSN 09593845), *International Journal of Information Management* (ISSN 02684012).

Most of the journals in this group are international. *Restaurator – International Journal for Preservation of Library and Archival Material* is the only international periodical that specializes exclusively in the conservation of library and archive materials. The articles are written in English with summaries in English, French and German.

Other journals the main focus of which is management publish research results on the development of library and information services from both the historical and contemporary perspective, as well as articles where the role of information in cultural, organizational, national and international projects is analyzed and also reports on current trends of Library and Information Science development around the world.

Table 1. The "Library and Information Management" thematic group	
Topic	Journal
Personnel management	<i>Library Management</i> <i>Information and Organization</i>
Finance management	<i>Library Collections, Acquisition and Technical Services</i> <i>International Journal of Information Management</i>
Knowledge management	<i>Knowledge Management Research and Practice</i> <i>Journal of Knowledge Management</i>
Innovation and information technology management	<i>Aslib Journal of Information Management</i> <i>Journal of Information Technology</i> <i>Libri</i> <i>Information Technology and People</i> <i>European Journal of Information Systems</i>
Crowdsourcing	<i>Restaurator – International Journal for Preservation of Library and Archival Material</i>
Outsourcing	<i>Library Collections, Acquisition and Technical Services</i>

The international scientific journal *Libri* takes up an important position among these journals. International journals *Aslib Journal of Information Management* and *International Journal of Information Management* publish papers that cover management processes, including various aspects: economic, behavioral, social, ethical, technological, international, business-related and political. The papers are double-blind peer reviewed. *Information Research* is an open access, international, scholarly journal that publishes papers in the fields of information science, information management, information systems, information policy, archives and records management and librarianship.

It is also advisable to pay attention to the *Knowledge Management Research and Practice* and *Library Collections, Acquisition and Technical Services* journals.

Professional communication environment optimization on different levels (international, national) depends on defining the basic directions and tasks of the library development in the system of scientific communication, which is directly connected with journals. Use of journals significantly influences the relationships between the library, scientific thought and communication in scientific fields over the different historical periods of society development. Therefore, it is extremely important to share information on the

interdependence of library communications of different countries; the social and communication potential of libraries; collaboration in the library community. That is why the thematic group of journals focused on communication is emphasized.

The key topics covered in the journals of the fourth thematic group are: cooperation (e.g. between libraries and museums or other institutions; professional collaboration etc.), social interaction, networking, social media and space; scholarly communication etc. (Figure 3).

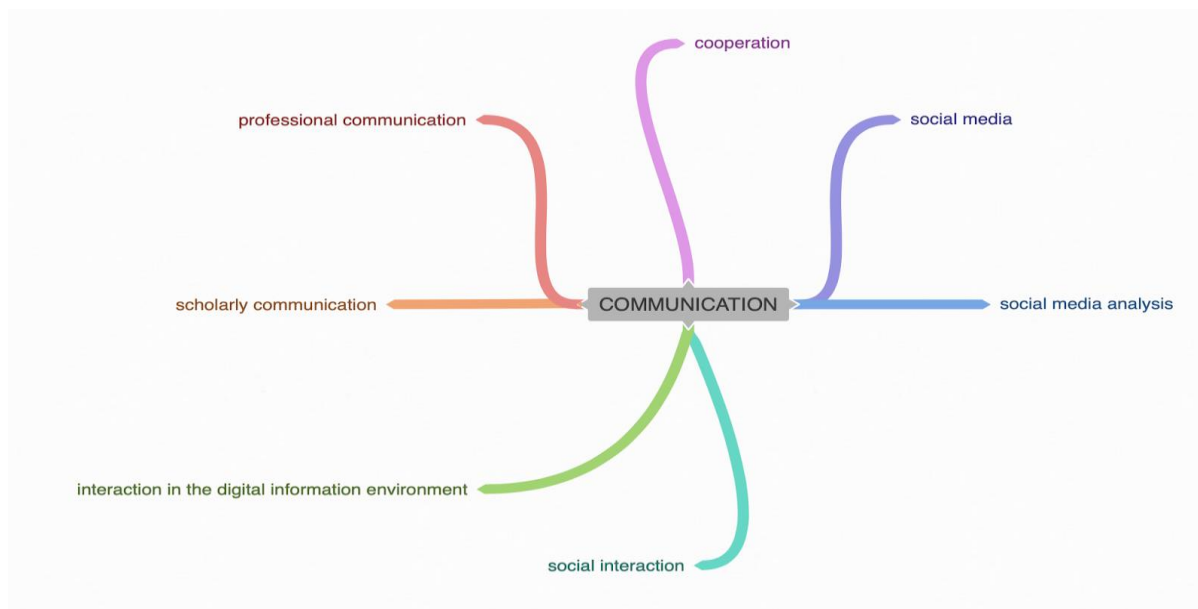


Figure 3. The thematic group of library and information science journals that focus on various types of communication

The topics such as theories, concepts, models, frameworks and philosophies related to documents and recorded knowledge are covered by *Journal of Documentation* (ISSN 00220418), *The Research Evaluation* (ISSN 0958-2029), *Scientometrics* (ISSN 15882861, 01389130), *Performance Measurement and Metrics* (ISSN 1467-8047), *Global Knowledge, Memory and Communication* (ISSN 0024-2535) journals focus on evaluation and assessment of scientific research, technological development and innovation, and also scientific research methods. For instance, *Research Evaluation* is an interdisciplinary, international journal that publishes papers of academics from various fields including library and information science papers on a very broad range of topics connected to evaluation of activities concerned with scientific research in the era of technological development and innovation. Accreditation, standards and benchmarking for libraries, museums and archives; the role of performance measurement and assessment in effecting organizational and culture change; performance measurement in service improvement; assessment in the management of libraries, museums and archives etc. are the topics of *Performance Measurement and Metrics*. *Global Knowledge, Memory and Communication* publishes papers where the way that people and organizations interact in the digital information environment is explored.

Conclusion

The research results of analyzing the thematic focus of library and information science journals of the leading European countries allow to make conclusion of the promotion of library science topics in the documentary science and information science journals and vice

versa. Meaning that scholarly interdisciplinary communication is expanding in the context of information society development. Highly productive researchers communicate with/to each other both within and outside the field. Co-publishing is the result of the mentioned above communicative behavior. Specifically among the authors of library science journals 36.36% of authors are library science specialists, 8.8% of authors are computer science specialists, 7.44% of authors are communication science specialists, 5.04% of authors work at technological institutes and 4.88% are business specialists.

The quantity of articles on the following topics: communications, computer science, information systems, management, social interactions, libraries in social media; bibliometric studies, library professional development; changes in user information behavior is increasing in library and information science journals. It can be noted that export / import of the mentioned above topics is happening in the journals of documentary science, library and information science. In addition, it is possible to say that publication of library science topics in non-library science journals in various fields is increasing. In particular, library science specialists publish their research results in medical and natural science journals.

The publications in library and information science journals for most of the part are: analytical, related to the coverage of external influence on library activity; research, which reveal the methodology and research results in the field of library and information science; statements that substantiate strategies and future development of library education and practice; historical, that focus on characterizing different stages of library systems, individual libraries and library technologies development; project-oriented that provide approaches and features for the implementation of projects and programs in the library community.

In general, analysis of the thematic focus of European library and information science journals provides means for taking into account library and information science trends in the leading European countries, helps to evaluate the performance of Ukrainian libraries and compare it with foreign libraries and provides an opportunity to increase the level of professional knowledge and communication.

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