

An International Journal on Grey Literature



Spring 2014 – TGJ Volume 10, Number 1

‘SUSTAINING GOOD PRACTICES IN GREY LITERATURE’

GreyNet

The Grey Journal

An International Journal on Grey Literature

COLOPHON

Journal Editor:

Dr. Dominic J. Farace
Grey Literature Network Service
GreyNet, The Netherlands
journal@grey-net.org

Associate Editors:

Julia Gelfand
University of California, Irvine
UCI, United States

Dr. Debbie L. Rabina
School of Information and Library Science
Pratt Institute, United States

Dr. Joachim Schöpfel
Université Charles de Gaulle Lille 3
France

Gretta E. Siegel
Portland State University
PSU, United States

Kate Wittenberg
Project Director, Client and Partnership
Development at Ithaka, United States

Technical Editor:

Jerry Frantzen, TextRelease

CIP

The Grey Journal (TGJ): An international journal on grey literature / D.J. Farace (Journal Editor); J. Frantzen (Technical Editor) ; GreyNet, Grey Literature Network Service. - Amsterdam: TextRelease, Volume 10, Number 1, Spring 2014. - CVTISR, EBSCO, FEDLINK-Library of Congress, Inist-CNRS, ISTI-CNR, KISTI, NIS-IAEA, NTK, and NYAM are Corporate Authors and Associate Members of GreyNet International. This serial publication appears three times a year - in spring, summer, and autumn. Each issue is thematic and deals with one or more related topics in the field of grey literature. The Grey Journal appears both in print and electronic formats.
ISSN 1574-1796 (Print)
ISSN 1574-180X (E-Print/PDF)
ISSN 1574-9320 (CD-Rom)

Subscription Rates:

€240 institutional, including postage & handling

Contact Address:

Reprint Service, Back Issues, Document Delivery,
Advertising, Inserts, Subscriptions:

TextRelease
Javastraat 194-HS
1095 CP Amsterdam
Netherlands
T/F +31 (0) 20 331.2420
info@textrelease.com
<http://www.textrelease.com/gjpublications.html>

About TGJ

The Grey Journal is a flagship journal for the international grey literature community. It crosses continents, disciplines, and sectors both public and private.

The Grey Journal not only deals with the topic of grey literature but is itself a document type classified as grey literature. It is akin to other grey serial publications, such as conference proceedings, reports, working papers, etc.



The Grey Journal is geared to Colleges and Schools of Library and Information Studies, as well as, information professionals, who produce, publish, process, manage, disseminate, and use grey literature e.g. researchers, editors, librarians, documentalists, archivists, journalists, intermediaries, etc.

About GreyNet

The Grey Literature Network Services was established in order to facilitate dialog, research, and communication between persons and organizations in the field of grey literature. GreyNet further seeks to identify and distribute information on and about grey literature in networked environments. Its main activities include the International Conference Series on Grey Literature, the creation and maintenance of web-based resources, a moderated Listserv, and The Grey Journal. GreyNet is also engaged in the development of distance learning courses for graduate and post-graduate students, as well as workshops and seminars for practitioners.

Full-Text License Agreement

In 2004, TextRelease entered into an electronic licensing relationship with EBSCO Publishing, the world's most prolific aggregator of full text journals, magazines and other sources. The full text of articles in The Grey Journal (TGJ) can be found in *Library, Information Science & Technology Abstracts* (LISTA) full-text database.

© 2014 TextRelease

Copyright, all rights reserved. No part of this publication may be reproduced, stored in or introduced into a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without prior permission of the publisher.

Contents

'SUSTAINING GOOD PRACTICES IN GREY LITERATURE'

Contribution to the improvement of dissemination of grey literature – JAEA Library's efforts for collecting, organizing and disseminating information on nuclear accidents	7
<i>Kiyoshi Ikeda, Takeshi Ohshima, Mayuki Gonda, Shun Nagaya, Misa Hayakawa, Yukinobu Mineo, Minoru Yonezawa, and Keizo Itabashi (Japan)</i>	
Guiding the Grey: The Implementation and Evaluation of a Journal Club amongst a Librarian and Clinical Practice Guideline Developers – A Cancer Care Case Study	15
<i>Marcus Vaska, Xanthoula Kostaras, Elysa Meek, Emily MacLeod, Inderjeet Sahota, Melissa Shea-Budgell, Brae Surgeoner, and Laurissa Watson (Canada)</i>	
Technology Transfer Support on National Level	25
<i>Ľubomír Bilský, Adriana Shearman, and Miroslav Kubiš (Slovak Republic)</i>	
Federal GL System Input Flow Analysis	33
<i>Aleksandr V. Starovoitov, Yuri M. Bogdanov, Aleksandr M. Bastrykin, Anton I. Borzykh and Leonid P. Pavlov (Russia)</i>	
Grey Communities: A Scientometric Approach to Grey Literature, In and Outside of GreyNet	38
<i>Hélène Prost and Joachim Schöpfel (France)</i>	
GreyGuide - Guide to Good Practice in Grey Literature: A Community Driven Open Resource Project ...	51
<i>Stefania Biagioni and Carlo Carlesi (Italy), Joachim Schöpfel (France), Dominic Farace and Jerry Frantzen (The Netherlands)</i>	

Colophon.....	2
Editor's Note.....	5
On the News Front	
GreyForum Workshop 3.1	
Grey Literature and Policy Development: The Pisa Declaration.....	56
GL16 Call for Papers	
'Grey Literature Lobby: Engines and Requesters for Change'.....	57
Advertisements	
NTK, National Technical Library, Prague, Czech Republic.....	4
IAEA, Department of Nuclear Energy.....	6
NYAM, New York Academy of Medicine, USA.....	14
CVTI SR, Slovak Centre of Scientific and Technical Information, Slovak Republic.....	24
The Grey Journal's Tenth Anniversary Special Offer.....	50
About the Authors.....	58
Notes for Contributors.....	59

NTK

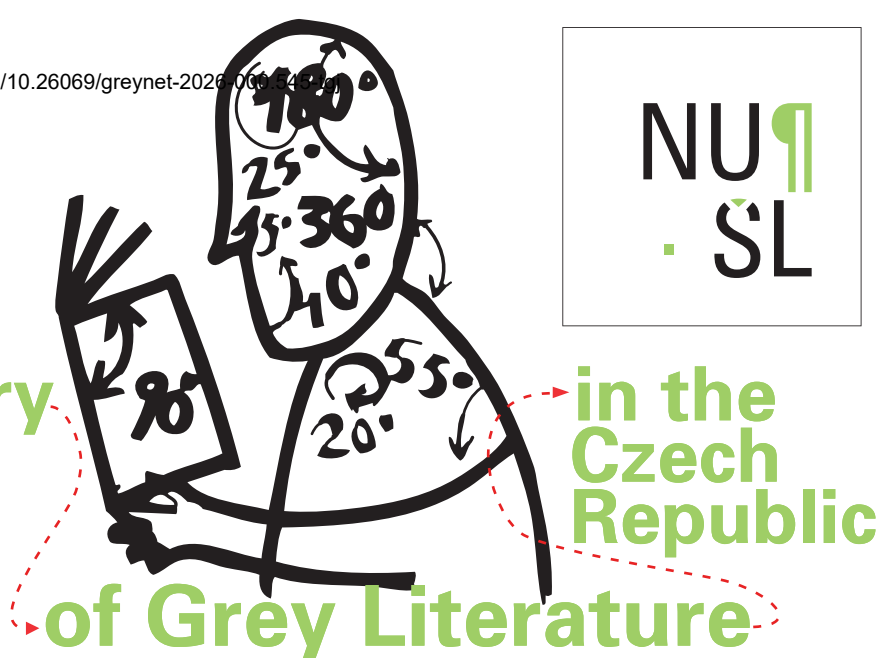
<https://doi.org/10.26069/greynet-2026-0000492>

50°6'14.083"N, 14°23'26.365"E

Národní technická knihovna
National Technical Library

NU
SL

National Repository



Features

Website: www.nusl.cz

Provider: National Technical Library

Records: over 200 000 records

Partners: over 90 organizations

Source area: Academy of Science, Public Research Institutions, Universities, Libraries etc.

International Cooperation: OpenGrey, DRIVER, ROAR, OpenDOAR

Collection provenance: Czech Republic

Based on

Project: The Digital Library for Grey Literature

– Functional Model and Pilot Implementation (2008 – 2011)

Participants: the National Technical Library, the University of Economics Prague

Financial support: by the Ministry of Culture of the Czech Republic acknowledged

Goals

- Central access to grey literature and the results of research and development in the CR
- Support of science, research and education
- Systematic collection of metadata and digital documents
- Long-term archiving and preservation
- Cooperation with foreign repository

Support of expert discussion about Grey Literature

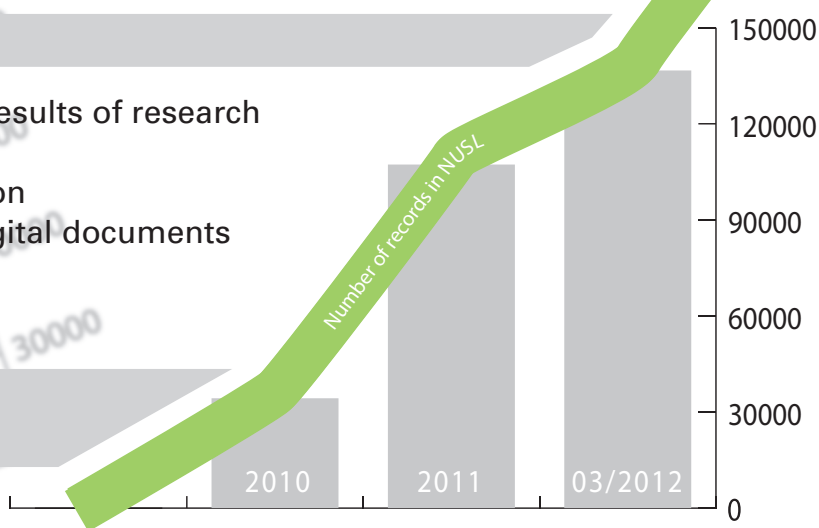
Annual Workshops:

<http://nrgl.techlib.cz/index.php/Workshop>

Informative Web pages: <http://nrgl.techlib.cz>

Publication: Grey Literature Repositories

<http://nrgl.techlib.cz/index.php/Book>



www.nusl.cz



Editor's Note

Decision and policy makers need to be informed on the value and wealth of grey literature, thus legitimizing further investments in this field of information. Lobbying grey literature has its very roots in GreyNet's international conference series, which has grown and rallies over the past two decades by promoting research and publishing their results. The grey literature lobby seeks to guarantee that the interests of a diverse and widespread community of information professionals and practitioners are served.

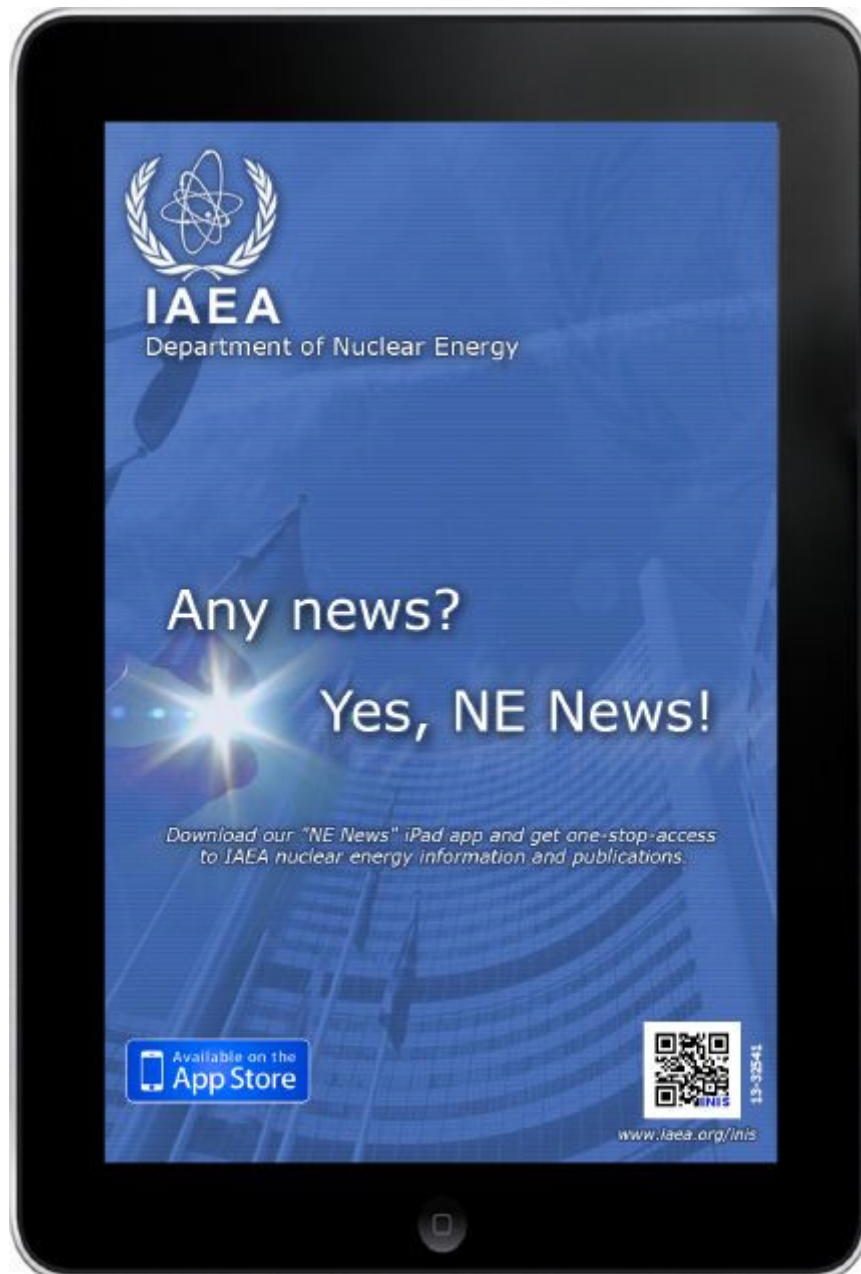
Like other fields in library and information science, technology is one of the primary engines driving change in grey literature. However, there are other engines for change that are needed to further sustain and develop this field of information. Policy development and economic stimulus are two such challenges now facing the community.

Changes in the production and sharing of knowledge, changes in the requirements for storage, access, and preservation of grey literature, as well as ensuing change in the demands of users require a concerted effort and response on the part of the grey literature community. New stakeholders and net-users must be summoned and heard, because their requests will further fuel the right kind of debate needed to open the wealth of grey literature to wider audiences.

The social impact of grey literature will be judged by the value placed on its public service. Your response to this year's Call for Papers will help to lobby and engineer needed change.

Dominic Farace
journal@greynet.org

Grey Literature is a field in library and Information science that deals with the production, distribution, and access to multiple document types produced on all levels of government, academics, business, and industry in electronic and print formats not controlled by commercial publishing i.e. where publishing is not the primary activity of the producing body.



Contribution to the improvement of dissemination of grey literature - JAEA Library's efforts for collecting, organizing and disseminating information on nuclear accidents^{*}

Kiyoshi Ikeda, Takeshi Ohshima, Mayuki Gonda, Shun Nagaya, Misa Hayakawa,
Yukinobu Mineo, Minoru Yonezawa, and Keizo Itabashi (Japan)

Abstract

In March 2011, the Fukushima Daiichi Nuclear Power Station Accident occurred in Japan. After the accident, parts of information on the accident has been distributed as grey literature and they cause some issues in terms of permanent accessibility to the information. This paper introduces the activity of the Japan Atomic Energy Agency Library as an example of efforts to improve access of Internet information using the DSpace. Consequently, we contributed to the improvement of the dissemination of grey literature at the following three points; (1) to ensure permanent access to Internet information by cooperating with the National Diet Library's Web archiving project, (2) to develop standardized metadata schema and classification system, (3) to develop prototype system using DSpace and compile about 36,000 metadata.

1. Introduction

In March 2011, the Great East Earthquake occurred off the northeast coast of Japan. The Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company (hereinafter referred to as "TEPCO") Accident (hereinafter referred to as "the Fukushima Accident") occurred. After the Fukushima Accident, Japanese governments, research institutes and TEPCO started releasing information on the accident by a various kind of information media, such as literatures like books, articles, oral presentation information, proceedings, technical reports and Internet information.

Because it is very important for us to preserve experience and know-how obtained from the Fukushima Accident, Japan Atomic Energy Agency (hereinafter referred to as "JAEA") Library has started activities to collect and disseminate such the Fukushima Accident information above. However, parts of information on the Fukushima Accident have been distributed as grey literature and they cause some issues in terms of permanent accessibility to the information.

It may be true that Internet information is not grey literature because it is usually open to the public. However, normally Internet information does not have permanent accessibility, there is a lack of bibliographical control, and some of the websites have been inaccessible and disappeared. Thus, on the contrary, it should be mentioned Internet information is Grey literature. In addition, it is difficult to get oral presentation information of latest research results at the local meetings related to the Fukushima Accident, especially held in Japan, because proceedings of oral presentation is not always published as literature in print and electronic formats, and only participants of the meetings could share information. In this paper, the authors introduce how they contribute to the improvement of the dissemination of grey literature, i.e. internet information and oral presentation information on the Fukushima Accident by developing the archive system of DSpace, creating the metadata and organizing them with classification system.

2. Current status of JAEA Library activities

2.1 Outline of JAEA Library

JAEA is a comprehensive research and development organization that aims at the practical use of nuclear energy and is involved in basic and applied research through the establishment of nuclear fuel cycle.

Engaged in JAEA, its Library is one of the largest nuclear information centers in Japan, and has supported the scientific research and development activities throughout Japan. JAEA Library collects and provides information in the fields of nuclear science. JAEA Library also publishes JAEA Reports originated from JAEA's R&D results and distributes them widely. Part of the R&D results includes their full-texts being available on the JAEA Library website. Another main role of the JAEA Library is the International Nuclear Information System (hereinafter referred to as "INIS") National Center for Japan. INIS is the open access database for published scientific literature on the peaceful uses of nuclear science and technology.

^{*} First published in the GL15 Conference Proceedings, March 2014.

Since the Fukushima Accident, many information requests on the accident have been addressed to the JAEA library. In order to meet the requests, we began collecting, compiling and distributing Fukushima Accident reference information from the special website immediately after the accident. JAEA Library has also sent INIS input records of literature related to the Fukushima Accident to the International Atomic Energy Agency (hereinafter referred to as "IAEA").

2.2 Special website of the Fukushima Accident's reference information

JAEA Library has been disseminating information related to Fukushima Accident via the special website since April 2011 after the occurrence of the Fukushima Accident (Fig.1).

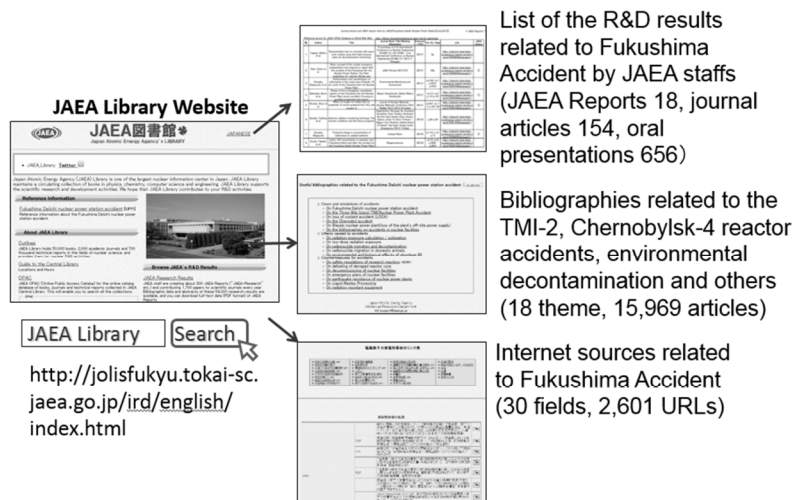


Fig.1 Special website of JAEA Library related to Fukushima Accident

The special website consists of the following contents:

- Lists of the JAEA research and development results,
- Useful bibliographies (radiocesium dispersion simulation, health effects, contamination countermeasures etc),
- Internet sources.

The list of the JAEA R&D results provides journals or conferences paper and JAEA Reports and oral presentations related to the Fukushima Accident by JAEA staffs. JAEA Reports have been made downloadable in full text freely as of today via the Internet.

The 'bibliographies' provides eighteen themes of bibliographic data on list related to the Fukushima Accident, such as Three Mile Island accident, Chernobyl accident, radioactive liquid waste processing, radionuclide migration, decontamination etc. It provides about sixteen thousand articles of bibliographic data in total.

In Internet sources, we collect about 2,000 documents on the Internet related to the Fukushima Accident and categorize them into 30 themes. Types of the collected documents include full-text, html, figure, photo, and movie data related to the Fukushima Accident. They include, for example, reports compiled by the Japanese Government, Diet, NPO, etc.[3][4][5][6]. Furthermore, raw data of technical information such as plant parameters and radiation monitoring. Our library staff check all of the links to the Internet sources quarterly because links don't provide permanent access and they are sometimes changed or deleted.

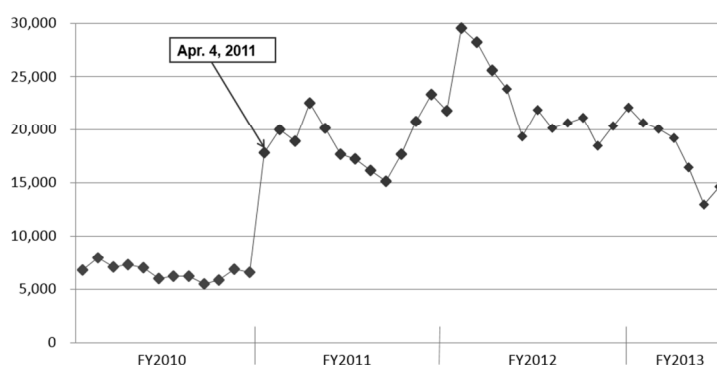


Fig.2 Number of Access of JAEA Library website

Fig. 2 shows the total number of access of JAEA Library website. It is obvious that number of access has rapidly increased after the release of the special website in April 2011. There have been about 15,000 accesses per month to the Fukushima Accident related information of JAEA Library website.

3. Development of the Fukushima Accident Archive System

Our special website originally doesn't provide search functionality, it is not possible to search entire information on the website and nor is permanent access usually ensured regarding internet information. Therefore, we decided to develop a system which has search functionality and selected DSpace for the system because DSpace is a commonly used as an institutional repository system, supporting OAI-PMH and capable of processing standardized metadata (Fig.3).

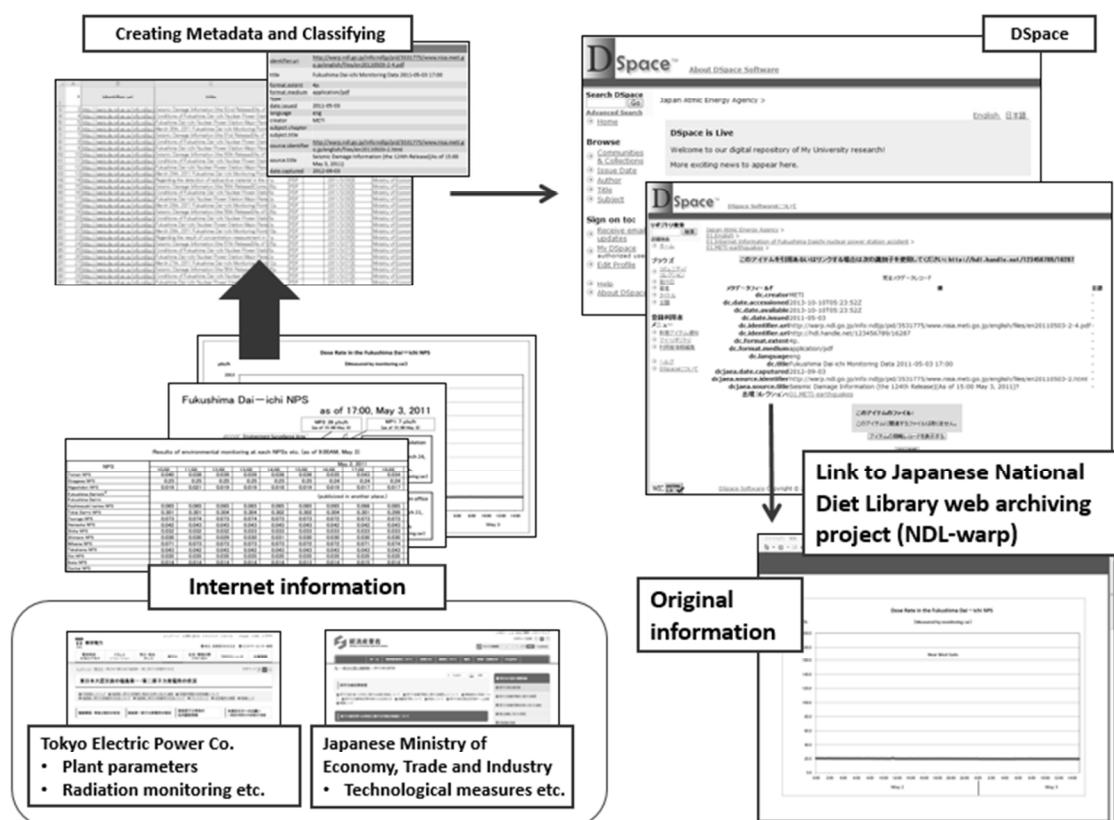


Fig. 3 Fukushima Accident Archive System to disseminate of Internet Information with the metadata and Classification System

To achieve the dissemination of Internet information on the Fukushima Accident and the contribution to the improvement of dissemination of grey literature, there are challenging Issues: (1) To ensure accessibility of Internet information, (2) To organize information in a systematic manner.

3.1 Ensuring accessibility to Internet information.

To solve the first issue, we have started to cooperate with the National Diet Library (hereinafter referred to as "NDL"). The NDL is the only national library in Japan and it acquires all materials published in Japan and preserves them as the only depository library in Japan. NDL compiles catalogs of these publications in a database or other format, and with these collections provides library services.

The NDL has been providing the Web Archiving Project (WARP) since 2002. In WARP the NDL has collected information in the form of website of the following: the government, the Diet, the courts, local governments, independent administrative organizations, universities and cultural and international events held in Japan. A part of these archived websites is provided on the Internet. We have connected our metadata directly with the appropriate archived information in NDL's WARP via hyperlink. As a result of cooperation between JAEA and NDL, various kinds of Internet information will be available and permanent access to these internet information will be ensured. We have already extracted and created about 36,000 metadata from the Ministry of Economy, Trade and Industry (hereinafter referred to as "METI") and TEPCO websites.

3.2 Organization of information in a systematic manner

3.2.1 Metadata Scheme

To solve the second issue, we have needed to establish bibliographic control rule, i.e. metadata format for Internet information. We have chosen Simple Dublin Core(Simple DC) as our metadata format(Fig.4). In developing metadata of Internet information, we have needed some considerations on bibliographic control rule.

Element	Value (ex)
identifier.uri	http://warp.ndl.go.jp/info:ndljp/pid/3531775/www.nisa.meti.go.jp/english/files/en20110503-2-4.pdf
title	Fukushima Dai-ichi Monitoring Data 2011-05-03 17:00
format.extent	4p.
format.medium	application/pdf
Type	
date.issued	2011-05-03
language	eng
creator	METI
subject.chapter	
subject.title	
source.identifier	http://warp.ndl.go.jp/info:ndljp/pid/3531775/www.nisa.meti.go.jp/english/files/en20110503-2.html
source.title	Seismic Damage Information (the 124th Release)(As of 15:00 May 3, 2011)
date.captured	2012-09-03

Fig.4 Metadata of Internet information related to Fukushima Accident as an example

Concerning date element, literature has only one date element i.e. publication date. But Internet information has more than one date element, such as release date and time, update date and time etc. Then we have to decide one date element for Internet information.

Another instance is the title element. Usually pictures themselves have no titles, on the other hand, some materials have more than one title. In such case, it is difficult for users to know the content of the material without appropriate metadata. Eventually, we complement the title by adding time, etc and add URL of upper level of the website page which has the link to the original information as source information on "source.identifier" and "source.title".

3.2.2 Classification System

Classification System is very useful to organize collected informatin as well as to let users access necessary information easily. So, creating Classification System is important work for us.

Classification "broad categories"	Report of Japanese Government to the IAEA Ministerial Conference on Nuclear Safety - The Accident at TEPCO's Fukushima Nuclear Power Stations (June 2011)	The official report of Executive summary The Fukushima Nuclear Accident Independent Investigation Commission (July 2011)	Investigation Committee on the Accident at Fukushima Nuclear (July 2011)	Independent Investigation Commission on the Fukushima Daiichi Nuclear Accident (February 2011)
1. current situation in Japan before the Accident	1. Introduction	1. Was the accident preventable?	1. Introduction	Part 1 The damage and accident responses at the Fukushima Dai-ichi nuclear plant
2. Disaster damage in Japan from the Tohoku Earthquake and Tsunami	2. Situation regarding Nuclear Safety Regulations and Other Regulatory Frameworks in Japan before the Accident	1.1 Essential lack of robustness against earthquakes	1. Overview of the Investigation Committee	Part 2 The emergency responses taken by the government, nuclear power plant operators and first responders, crisis management by Prime Minister's Office, and the reality of the emergency
3. Occurrence and progression of the accident at the Fukushima 1PPS	3.1. Landslide and nuclear reactor framework for nuclear safety	1.1.1 Overview of the Fukushima Daiichi Nuclear Power Plant	1. Activities of the Investigation Committee	Part 3 The historical context and structural factors that led to the emergence of safety issues
4. Response to the nuclear emergency	3.2. Mechanisms for nuclear emergency responses	1.1.2 Changes in the seismic safety evaluation of the Fukushima Daiichi Nuclear Power Plant	1. The Relationship between the Final Report and Interim Report	Part 4 Global context: international nuclear safety regime, nuclear security and IAEA Japan activities
5. Discharge of Radioactive Materials to the Environment	3.3. Disaster damage in Japan from the Tohoku Earthquake and Tsunami	1.1.3 Seismic vulnerability of the Fukushima Daiichi Nuclear Power Plant when it was first impacted	2. The Damage and Accident Responses at the Fukushima Dai-ichi 1PPS and the Fukushima Dai-ichi 2PPS	Search table of contents in documents only
6. Situation regarding Radiation Exposure	3.4. Damage by the earthquake and tsunami in Japan	1.1.4 Establishment of the "Regulatory Guide for Reviewing Seismic Design" and seismic safety evaluation	3. The Damage at the Major Systems and Facilities of Units 1, 2 and 3 of the Fukushima Dai-ichi 1PPS	
7. Cooperation with the International Community	3.5. Damage caused by earthquake and tsunami during Fukushima 1PPS	1.1.5 Fault lines in the seismic vulnerability against the seismic design for reviewing seismic design	(1) Introduction	
8. Communication regarding the Accident	3.6. Basic and transient damage to other 1PPSs	1.1.6 Did Fukushima have an impact on the progress of the accident?	(2) Major instrumentation malfunctions and related damage	
9. Further efforts to settle the accident in the future	3.7. Assessment of earthquake and tsunami damage	1.1.7 "What if this earthquake was worse? Vulnerability to the Fukushima Daiichi Nuclear Power Plant prior to the accident"	(3) Analysis on reactor phenomena concerning severe accidents	
10. Response at other 1PPSs	3.8. Occurrence and Development of Accidents at the Fukushima Nuclear Power Stations	1.2. Transient risk recognized but lacked countermeasures	(4) Damage to the major systems and facilities of Unit 1	
11. Lessons Learned from the Accident Three Days	3.9. Outline of Fukushima Nuclear Power Stations	1.2.1 Changes in transient probabilities and damage production over time	(5) Damage to the major systems and facilities of Unit 2	
	3.10. Safety Assessment and Other Initiatives in Fukushima 1PPS	1.2.2 Making full of the vulnerability that leads to loss of all or greater sources and core damage due to tsunami	(6) Damage to the major systems and facilities of Unit 3	
	3.11. Condition of the Fukushima 1PPS before the earthquake	1.2.3 Problems around the review of tsunami height	(7) Examination of a Hydrogen Gas Explosion	
	3.12. Occurrence and progression of the accident at the Fukushima 1PPS	1.2.4 Lack of transparency surrounding TEPCO and JCER	(8) Types of explosion	
	3.13. Situation of Each Unit etc. at Fukushima 1PPS	1.2.5 Adequacy of probability theory	(9) Characterization of hydrogen gas explosion	
	3.14. Situation at Other Nuclear Power Stations	1.2.6 Severe nuclear consequences damaged international standards	(10) The explosion at the Unit 1 B&B	
	3.15. Evaluation of accident consequences	1.3. Inadequacy exposed by the nuclear accident	(11) The condition at the Unit 2 B&B and B&C	
	3.16. Factors relevant as a result of policies between operators and regulatory authorities	1.3.1 Factors relevant as a result of policies between operators and regulatory authorities	(12) The explosion at the Unit 3 B&B	
	3.17. Various coverage of severe accident consequences and delayed implementation in Japan	1.3.2 Various coverage of severe accident consequences and delayed implementation in Japan	(13) Explosion at the Unit 4 B&B	
	3.18. Emergency response after the accident occurred	2. Evaluation of the accident	(14) Response to the accident at Units 3 and 6 of the Fukushima Dai-ichi 1PPS	
	3.19. Implementation of environmental monitoring	2.1. How the accident developed and an overall review	(15) Overview of the response to the accident at Units 3 and 6 of the Fukushima Dai-ichi 1PPS	
	3.20. Measures for agricultural food safety and drinking water, etc.	2.1.1 Further understanding of the accident	(16) Effect of the damage to Units 3 and 6 at the Fukushima Dai-ichi 1PPS	
	3.21. Measures for additional protected areas	2.1.2 Day damage and the impact of the earthquake and tsunami	(17) Effect of the damage to Units 3 and 6 at the Fukushima Dai-ichi 1PPS	
	3.22. Assessment of nuclear emergency response	2.1.3 Promotion of the reactor shutdown	(18) Situation concerning reactor depressurization and water injection into the reactor	
	3.23. Discharge of Radioactive Materials to the Environment	2.1.4 Process of radiation release based on the parameters of the reactor	(19) Status of the B&B up until the restoration of the B&B system and the response to this	
	3.24. Evaluation of the amount of radioactive materials discharged to the sea	2.1.5 Factors to prevent accidents and the accident risk at other nuclear power plants	(20) Situation from the restoration of the B&B system until the full shutdown	
	3.25. Evaluation of the amount of radioactive materials discharged to the sea	2.1.6 Discharge	(21) Restoration of External Power to the Fukushima Dai-ichi 1PPS	
	3.26. Situation regarding Radiation Exposure	2.2. Analysis and discussion on some issues	(22) Overview of the external power installation to the Fukushima Dai-ichi 1PPS	
	3.27. Situation regarding radiation exposure concerning radiation workers and other related workers	2.2.1 Reactor power status at the Fukushima Dai-ichi Nuclear Power Plant due to the Great East Japan earthquake	(23) The damage to the external power installations to the Fukushima Dai-ichi 1PPS	
	3.28. Response to radiation exposure of workers in the vicinity and the overall situation	2.2.2 Possibility of damage to important devices due to the earthquake action		
	3.29. Evaluation of the status of radiation exposure			

Fig.5 Comparison of the contents of the Fukushima Accident investigation reports

We have first considered developing Classification System by referring and comparing the contents of the accident investigation reports [3][4][5][6] (Fig.5) because these reports discuss diversity of perspectives about the Fukushima accident. We think it is best to extract items that are common to those reports and to organize them.

Nuclear Knowledge Management Section of the IAEA is currently developing Nuclear Accident Knowledge Taxonomy for organization of data, information and knowledge from major nuclear accidents. This Taxonomy is planned to be used to disseminate those to IAEA member states. Then we have also started to consider to refer to IAEA's Taxonomy for our Classification System because IAEA's Taxonomy is very useful in the point that it specializes in accident for preserving and organizing knowledge of experience and know-how obtained from major nuclear accidents like Three Mile Island Accident and Chernobyl Accident.

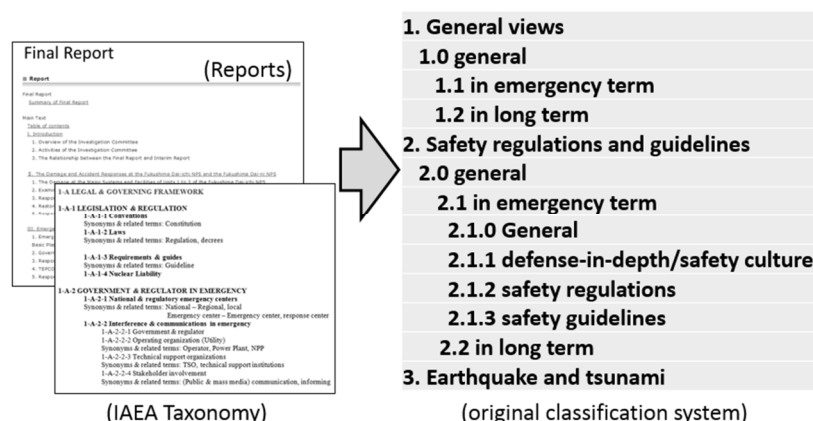


Fig.6 Development of the original classification system

But in the case of the Fukushima Accident, some situations are unique and are different from the past severe accidents like Chernobyl and Three Mile Island. For example, the Fukushima Accident has just moved from the emergency phase which is unlike the other two accidents. Thus, if we make use of IAEA's Taxonomy we need to add more categories on unique situations and long term management phase, etc to the IAEA's Taxonomy. For example, categories on earthquake, tsunami, and the removal of spent fuel and debris in nuclear reactor. We will give feedback to the IAEA Taxonomy, and we hope that our activity will result in the drastic improvement of convenience for them.

We are currently developing the original Classification System by a combination of these two classifications (Fig.6).

3.3 Oral presentation information

Many conferences, symposiums on Fukushima Accident have been hold after the accident and latest research results have been presented at the conferences. It is difficult to obtain and access such oral presentation information even if oral presentation is published in paper or in an electronic form because it is usually distributed only to the participants of the conference. Thus, oral presentation information is Grey Literature. So, we try to improve access to oral presentation information because it contains current research results which are cutting-edge and valuable information on the Fukushima accident.

Thus, we have created a metadata of about 2,000 oral presentations information on the Fukushima Accident in five conferences in Japan, such as annual meeting of the Atomic Energy Society of Japan. We have adopted Simple DC for oral presentation information as same as the Internet information.

Element	Value (ex)
identifier.uri	http://library-documents.jaea.go.jp/opac/br_search_detail.asp?id=589152&syubetsu=1
title	Risk communication practice after the Fukushima nuclear accident
creator	Ayame, Junko(Japan Atomic Energy Agency); Sugiyama, Kenji(Japan Atomic Energy Agency); ...
source.identifier	http://www.aesj.or.jp/meeting/index-e.html
source.title	General Issues, 2013 Fall Meeting of the Atomic Energy Society of Japan,3-5 September 2013. Hachinohe Inst. of Technology, Aomori

Fig.7 Metadata of Oral presentation information related to Fukushima Accident as an example

As for oral presentation information we have input JAEA library holding information into the "identifier.uri" field of the metadata to ensure access to the full text of the preprint appropriately. In addition, we have input date of the conference into the source field so that users can know conference name, session name, etc. on "source.identifier" and "source title" (Fig.7).

4. Summary

We contributed to the improvement of the dissemination of grey literature at the following ongoing three points.

1. To ensure permanent access to Internet information by cooperating with the National Diet Library's Web archiving project WARP.
2. To develop standardized metadata schema and classification system for the Fukushima Accident Internet information as well as oral presentation information. We contribute to the organization of grey literature.
3. To develop prototype system using DSpace and compile about 36,000 metadata and put them on the system. We also add information of 2,000 oral presentation information after we review and check them.

We will open to the public the Fukushima Archive using the DSpace next year.

5. Future plan

We would like to undertake the further development of the Fukushima Accident Information Archive.

We have created metadata from METI and TEPCO's websites. It is only a limited scope of a huge amount of information inside and outside Japan. So, we are going to collect, organize and disseminate as much metadata as possible through cooperation with related organizations.

JAEA library and NDL have already had cooperation on using archived information in NDL's WARP via hyperlink. In addition, we will provide metadata to NDL Great East Earthquake Archive "HINAGIKU" which is one of the outcomes of WARP, so that NDL could make use of them.

We will also provide our metadata to INIS according to the INIS rule in order to enrich contents of INIS collection because INIS disseminates nuclear literature information as well (Fig.8).

We believe that cooperation with relevant organizations is essential for the success and growth of the Fukushima Archive. Our work has just started and the collection of Internet Information is limited, JAEA Library is going to collect, organize and disseminate as much information as possible for the future.

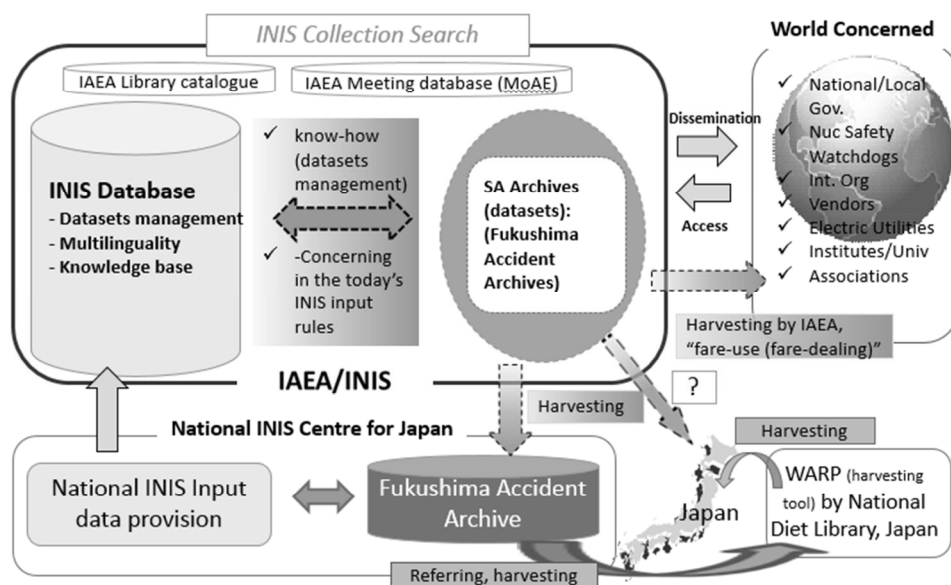


Fig.8 Cooperation with INIS

References

- [1] Ikeda, K., Nakajima, H. and Yonezawa, M. (2012) 'Introduction of Useful Bibliographies and Resources related to the Fukushima Daiichi Nuclear Power Station Accident through the JAEA Library', ATOMOSU (ATOMO-sigma, Journal of the Atomic Energy Society of Japan), Vol.54, No.8, pp.549-553 (in Japanese).
- [2] Nakajima, H., Ikeda, K., Yonezawa, M., Itabashi, K., Kiriya, E. and Iwata, S. (2012) 'Study for development of the Fukushima Dai-ichi nuclear power station accident archive', Journal of Japan Society of Information and Knowledge, Vol.22, No.4, pp.344-353 (in Japanese), https://www.jstage.jst.go.jp/article/jsik/22/4/22_22_344/_pdf, retrieved 30 June 2013.
- [3] The National Diet of Japan Fukushima Nuclear Accident Independent Investigation Commission (2012) 'Reports of the National Diet of Japan Fukushima Nuclear Accident Independent Investigation Commission', <http://warp.da.ndl.go.jp/info:ndljp/pid/3856371/naiic.go.jp/en/index.html>, retrieved 30 June 2013.
- [4] Investigation Committee on the Accident at Fukushima Nuclear Power Stations of Tokyo Electric Power Company (2012) 'Final report of Investigation Committee on the Accident at Fukushima Nuclear Power Stations of Tokyo Electric Power company', <http://www.cas.go.jp/jp/seisaku/icanps/eng/final-report.html>, retrieved 30 June 2013.
- [5] Fukushima Genpatsu Jiko Dokuritsu Kensyo linkai (2012) 'Fukushima Genpatsu Jiko Dokuritsu Kensyo linkai Chosa Kensyo Hokokusho' (in Eng: Investigation Report on Fukushima Daiichi Nuclear Power Plants Accident by Independent Investigation Panel for Fukushima Daiichi Nuclear Power Plants Accident, translated by author, K.Kunii), Rebuild Japan Initiative Foundation (in Japanese).
- [6] Tokyo Electric Power Company (2012) 'Fukushima Nuclear Accident Investigation Report', http://www.tepco.co.jp/en/press/corp-com/release/2012/1205638_1870.html, retrieved 30 June 2013.
- [7] NDL Great East Japan Earthquake Archive "HINAGIKU". <http://kn.ndl.go.jp/node?language=en>
- [8] INIS Collection Search. <http://inis.iaea.org/search/>

FIND THE PIECE THAT FITS YOUR PUZZLE



THE GREY LITERATURE REPORT FROM THE NEW YORK ACADEMY OF MEDICINE

Focused on health services research and selected public health topics, the Report delivers content from over 750 non-commercial publishers on a bi-monthly basis.

Report resources are selected and indexed by information professionals, and are searchable through the Academy Library's online catalog.

Let us help you put it all together; subscribe to the Grey Literature Report today!

For more information visit our website: www.greyliterature.org
or contact us at: greylithelp@nyam.org



**The New York
Academy of Medicine**

At the heart of urban health since 1847

Guiding the Grey: The Implementation and Evaluation of a Journal Club amongst a Librarian and Clinical Practice Guideline Developers – A Cancer Care Case Study*

Marcus Vaska, Xanthoula Kostaras, Emily MacLeod, Elysa Meek,
Melissa Shea-Budgell, and Laurissa Watson (Canada)

Abstract

Introduction/Goal: As a research-intensive facility located within a cancer care environment, library services provided at the Holy Cross Site closely adhere to an embedded librarian mandate, one where the librarian “actively engages in activities, possesses extensive knowledge of the researcher’s work, and offers assistance above and beyond common library service expectations” (Strain, 2011).

The Guideline Utilization Resource Unit (GURU) is composed of knowledge management specialists (KMS) and nurse facilitators (NF) who support multidisciplinary teams in developing, implementing, and evaluating provincial clinical practice guidelines (CPGs) for the diagnosis, staging, treatment and follow-up of cancer. These CPGs are evidence-based documents with consensus recommendations; they are freely available on a public website for access by practitioners and patients, and are a form of grey literature. Team members at GURU consult regularly with the librarian to ensure that the most accurate and comprehensive search strategy is used to develop CPGs. The goal of this paper is to describe the process of organizing and evaluating a journal club involving a unique collaboration between guideline developers and a librarian.

Procedure: The journal club is comprised of three KMSs, two NFs, the GURU Manager and an embedded librarian. The group has been meeting once per month since April 2012. Each member takes turns selecting two articles related to CPG development or implementation, and is responsible for leading an informal discussion. To evaluate the usefulness of the journal club and the impact of grey literature on CPG development in Alberta, all members of the journal club (n=7) were interviewed in a focus group setting or a semi-structured interview. Transcripts of audio-recorded interviews will be qualitatively analyzed for repeated themes related to knowledge gained from, and perceived benefits of journal club meetings.

Results: First, we hypothesize that monthly participation in the journal club will increase members’ knowledge of development, evaluation, and implementation of guidelines. Second, we believe that participants will have acquired a better understanding of the research process and how to critique current guideline research. Finally, we expect that members will report that the journal club provided the opportunity to facilitate discussions around topics that are less familiar to them. It is anticipated that this collaborative venture will further enhance the importance of grey literature and its usefulness for cancer care clinical practice guidelines.

Introduction

Holy Cross Site

Numerous medical breakthroughs have emerged over the years, as the result of research becoming an essential component of health care (Strain, 2011). Formerly a 600-bed hospital, the Holy Cross Site was converted into a primarily applied research-centered locale. This site also served as a satellite branch of the provincial Knowledge Management Department, collectively referred to as the Knowledge Resource Service (KRS). The embedded librarian at the Holy Cross Site provides library resources and services to support evidence-informed decision making, working closely with researchers on grant applications, proposals, evaluations, and systematic reviews. As with many projects focusing on service evaluation, including the journal club discussed in this paper, the overarching goal often pertains to the issue of quality improvement, namely whether or not efforts and involvement have enhanced knowledge, led to greater efficiency, and succeeded in improving and/or perhaps changing one’s everyday practice regimen.

While the term *embedded librarianship* has only received specific attention in the literature over the past few years, the tasks and duties associated with the role of an “embedded librarian” have existed in this profession for decades. As Schumaker and Talley (2009) note, an embedded librarian is one who actively engages in relationship-building activities, possesses extensive knowledge of the researcher’s work, performs complex analyses, and offers assistance above and beyond common library service expectations. This service mandate forms the basis to which the Holy Cross librarian adheres on

* First published in the GL15 Conference Proceedings, March 2014.

a daily basis when meeting with clients. Aside from participating in monthly journal club meetings, the Holy Cross Site librarian has provided consultation on search strategies used to support the development of clinical practice guidelines, assistance on exporting and formatting references, as well as facilitation of library instruction sessions and webinars. The importance of this liaising role cannot be overstated, as it provides the librarian with a comprehensive understanding of specific aspects of guideline development, leading to additional support.

Guideline Utilization Resource Unit (GURU)

Created in 2006 as a branch of the former Alberta Cancer Board (currently Cancer Control Alberta, Alberta Health Services [AHS]), GURU's primary objective is to support twelve of Alberta's tumour teams in the development of "evidence-informed clinical practice guidelines for site-specific cancers." (Guideline Utilization Resource Unit, 2013). Comprised of knowledge management specialists and nurse facilitators, GURU is involved with all aspects of guideline development, evaluation, and implementation, including surveillance, selection, synthesis, evaluation, and interpretation of evidence.

Clinical practice guidelines are a form of grey literature and are defined as "systematic statements about specific health problems intended to assist decision making" (Guideline Utilization Resource Unit, 2013). A substantial deliverable within each guideline is a thorough literature review, derived from the best evidence available to support a treatment or procedural recommendation. At the Holy Cross Site, GURU team members, particularly the knowledge management specialists, regularly consult with the librarian to ensure that the most accurate and comprehensive search strategy is used to develop the guidelines.

GURU produces between two and four guidelines annually for each tumour team. Guidelines cover most aspects of care, from diagnosis to follow-up and have been developed for most disease sites, from the most prominent cancer diagnoses (i.e., breast, lung, colorectal, and prostate cancers) to the less prominent cancers (i.e., head/neck, neuro-endocrine, and tumours with rare histologies). Upon completion, each guideline is published on the AHS website, www.albertahealthservices.ca/cancerguidelines.asp. Guidelines are periodically evaluated to determine whether practice in Alberta reflects the recommendations. Nurse facilitators then connect with the tumour teams to assist with implementation of the guidelines, especially where gaps exist between practice and the evidence.

Guidelines as a Type of Grey Literature

"Enhancing the transparency and accessibility of informally published research and information" (Australian Research Council, 2012) is a key grey literature goal. Relying on comprehensive literature reviews from the academically published "white" articles, in balance with the grey, the creation and dissemination of clinical practice guidelines in cancer care adheres closely to AHS' values of creating greater awareness in patient care in the hope that one day a cure will be found. (Alberta Health Services, 2013) Clinical practice guideline producers are able to share key information on evidence-based recommendations as soon as the guidelines are approved. As such, all of the research undertaken was fundamental in supporting the production of clinical practice guidelines, which are a key type of grey literature in cancer care.

The use of quality, evidence-based medicine is essential in guideline production; so too is use and retrieval of grey literature. Thus, the journal club, in accordance with how numerous journal clubs are run today, promotes evidence-based practice, critical appraisal, and continuing professional education (Swift, 2004, p. 67). Not only must this information be accurate and current, it must also be "reflective of scientific principles rather than tradition, habit, or outdated information" (Luby et al., 2006, p. 100). Further, in an effort to create greater awareness of the availability of this type of grey literature, guidelines are often freely and openly accessible to health practitioners for feedback and comments. Patients are also able to access the guidelines and, anecdotally, have come to the clinic ready to discuss the recommendations with their physicians. The guidelines are maintained on a regular basis; review and updates occur as needed or every one to two years.

Numerous health sciences libraries and health institutions at all levels (i.e. the Canadian Agency for Drugs and Technologies in Health [CADTH], the National Institutes of Health [NIH], and the World Health Organization [WHO]) have recognized the key role clinical practice guidelines play in grey literature-seeking pursuits.. For example, *Grey Horizon*, a grey literature current awareness blog in cancer care, has included guidelines as inclusion criteria since launching in April 2012. Numerous posts pertaining to the announcement of new clinical practice guidelines have been re-tweeted by GURU to colleagues across various provincial tumour teams. The Knowledge Resource Service (KRS) website, launched on August 7, 2013 as a means of providing a centralized -point-of-intake for AHS staff throughout the

province of Alberta, contains a separate page devoted to guidelines (<http://krs.libguides.com/cancerguidelines>), which is located within the Cancer Care subject guide. In addition, the webpage also connects to the Canadian Partnership Against Cancer, which offers numerous strategies and tips for appraising a high quality guideline.

Journal Clubs in Medical Disciplines/Fields

There are numerous means by which a journal club can be described. Nevertheless, a definition put forth more than a decade ago seems to have gained common, if not universal acceptance: "An educational meeting in which a group of individuals discuss current articles, providing a forum for a collective effort to keep up with the literature." (Kleinpell, 2002, p. 412). While the literature credits William Osler as founder of the first formal journal club at Montreal's McGill University in 1875, Buffington, Allen, and Farach (2008) state that a form of a journal club already existed in London nearly four decades earlier. Even though the format and structure of today's 21st century discussions may widely differ from the medical education meetings in the 19th century, developing reading, critiquing, analytical, reflective and evaluative skills (Dobrzanska and Cromack, 2005), still hold true as primary, achievable goals of undertaking such an endeavour. The benefits of holding such scholarly activity relate back to the core competencies valued by health professionals, essential in medical research, namely, remaining vigilant of the latest research available in one's field as well as critiquing and appraising the literature in that field, thus bridging research and practice (Kleinpell, 2002, p. 412). Certainly for journal club members, the opportunity exists to keep aware of the latest research available in a discipline, network with colleagues, and ultimately, by way of promoting these new research findings, improve patient care. For the librarian specifically, it also serves as a way to develop a greater appreciation and understanding of clinical practice guideline development and how pre-established standards are required to ensure that the care provided to cancer patients across the province of Alberta is of consistently high quality.

The success of journal clubs can perhaps be attributed to Brian Haynes, the pioneer of evidence-based medicine. The partnership between the content experts (knowledge management specialists), the clinical experts (nurse facilitators), and the researchers (GURU and the embedded librarian) all play a role in the issues discussed during journal club sessions, ultimately leading to the implementation of guidelines that directly impact patient care. In fact, these roles and responsibilities often intertwine.

Implementation

The idea of launching a journal club with a cancer care team was first envisioned by the Holy Cross librarian in February 2012. From 2009-2010, the librarian had been involved as a preceptor for a journal club with undergraduate medical education students, and wished to apply the concepts learned from this endeavor towards healthcare practitioners. Following a preliminary discussion between the librarian and GURU manager, it was determined that, while all journal club members would take turns gaining the experience of facilitating and leading a session, the librarian would be responsible for taking the lead role and maintaining overall responsibility for this initiative. When the call for participation/establishment of a journal club went out to all research units (~250 staff) working at the Holy Cross site, the librarian had expected there to be greater uptake, although a number of contributing factors, including lack of time commitment and lack of awareness around the functioning of a journal club, may have led to this reluctance in participation.

Dr. Joyce Johnson, registered nurse and director of the Southern California Permanente Medical Group, has developed a pyramid of ten steps to developing a journal club, which was closely adhered to in this pilot study. The fact that journal clubs have existed for over 138 years, speaks to their merit. As numerous other citations discussing journal clubs have done, Johnson (n.d.) posits two fundamental questions for journal club existence, namely "why develop a journal club?" and "are journal clubs really effective?" While a number of Johnson's (n.d.) tips and techniques are cited in several other publications discussing the benefits of holding journal clubs, "there appears to be no well-designed study which has investigated the impact of journal clubs on patient outcomes." This is an interesting argument, considering that several health-related journal clubs undoubtedly deal, whether indirectly or directly, with patient care; although not formally implemented yet, there have been discussions about possibly seeking patient input amongst the provincial Tumour Teams in Alberta, when developing guidelines.

The first two steps of Johnson's (n.d.) pyramid pertain to identifying a leader to organize the journal project and identifying clear goals of the journal club pursuit. The leadership responsibility was held by the Holy Cross embedded librarian, while the goals were identified by the journal club participants. Johnson's third level focuses on identifying the target audience. In this case, the current journal club is a diversified group, comprised of different roles (i.e. "target audiences").

With respect to scheduling, Johnson's (n.d.) fourth step, the inaugural Journal Club session was held in April 2012 in a virtual library setting referred to as the "Touchdown Suite" on the 6th floor of the Holy Cross Site. Session times were variable (mid-morning or mid-afternoon) and food was provided to encourage collegiality and enjoyment. As Johnson (n.d.) argues, "food is often an important element and supports attendance as well as discussion." Further, group theory was considered whereby clear boundaries were set, in order to encourage safety and creative thinking (Swift, 2004, p. 68). Reinforcing this facet, each session of the journal club was held at a round table, thus promoting increased participation amongst all members.

The fifth level of Johnson's (n.d.) journal club development pyramid pertains to the type of articles discussed. The article(s) selected (usually two in the case of the Journal Club pilot) aimed to be provocative, so as to stimulate discussion. Because of the variable backgrounds of GURU journal club participants, the opportunity to learn about creation of cancer guidelines from numerous perspectives was facilitated. Newman (2007) states that wherever possible, articles chosen should report original research; while meta-analyses, decision analyses and cost-effectiveness analyses are deemed acceptable, "they are harder to access critically because the results often depend on whether you can trust the authors and their underlying assumptions."

Employing journalistic tendencies, the librarian ensured that the questions of *who*, *what*, *where*, *when*, and *how*, were asked. In other words, *who* was involved in the study, *what* did the study investigate, *where* did it take place, *why* was it conducted, and perhaps, most importantly, how was it conducted? Aztema's (2004) argues that asking these questions are indeed important and despite Journal Club choosing not to adhere to such a formal structure, the librarian ensured that they were considered. Regardless of the informal setting, due diligence on the part of the presenter/facilitator was necessary. When the librarian facilitated and presented a discussion on clinical care pathways, his lack of experience in this area prevented him from forming a biased opinion, a dilemma that can often occur as Aztema admits that it is indeed "easy to criticize" (p. 173). Focusing solely on the facts presented in the article, the librarian maintained objectivity throughout.

In terms of organization, GURU team members kept a record of previously discussed articles in their internal shared network drive. In addition, the librarian created an archive of all articles in JournalFire, an online journal club discussion forum. While this resource has primarily been used as an archival storage facility, due to the demise of this website on October 15, 2013, all citations of article discussed in each Journal Club session have now been transferred over to RefWorks.

Interviews

Upon consultation with the Research Evaluation team at the Holy Cross Site, it was determined that semi-structured interviews would be conducted on an individual basis by a research associate from the Research Evaluation team. To eliminate any potential bias, interviewees were not made aware of any of the questions to be posed prior to the interview taking place. All interviews were held during the summer of 2013. Each session was audio-recorded and lasted approximately 25 to 45 minutes. A summer student was tasked with assisting in the transcription process. All responses were coded and the qualitative data was examined to identify themes and subsequent relationships relevant to the evaluation objectives.

All members of Journal Club, including five staff and the GURU manager, along with the Holy Cross Site embedded librarian (N=7), participated. A semi-structured interview guide was developed to assess participants' overall experiences as well as their comments and reflections regarding their involvement. The 25 questions posed were comprehensive and all-encompassing, addressing several aspects of the journal club process including facilitation, article selection and distribution, individual sessions themselves, involvement in relation to practice, and overall attitudes and perspectives.

Results & Evaluation

Facilitation: Many journal clubs run on a very traditional format, even though discussions may be rather informal. A pre-selected article is introduced, a facilitator/leader provides an executive summary, offers his/her opinion on issues presented, and from there, the discussion can turn into somewhat of a free-for-all, as all are eager to have their say. Johnson (n.d.), in her eighth step, suggests crafting a different format, such as beginning a journal club meeting with a case study, focusing on a particular technique or method found in the pre-required readings about to be presented.

Keeping the channels of communication open was exemplified in the open or round table format discussion in Journal Club. All Journal Club members commented that this approach created an atmosphere where all group members felt comfortable sharing their thoughts. Further, facilitators felt empowered to encourage open communication with all participants, even on topics that may have been

outside one's area of expertise. In addition, there was a high degree of comfort by all participants when asking clarification on unknown concepts, and all were given free reign to openly discuss opinions at each Journal Club session. Nevertheless, it was noted that the level of article discussion varied among certain facilitators, with some adding considerably more input to the conversation than others. Thus, more structured sessions may prove to be beneficial.

While attendance at each Journal Club was encouraged, adhering to Johnson's (n.d.) step of getting the word out in order to have a meaningful discussion amongst all, it was not mandatory. As a result, competing interests between workload and attendance did take place at times, with pressing deadlines occasionally prevailing over Journal Club meetings.

Three hypotheses pertaining to this pilot were tested to ascertain if perceived needs were met. First that monthly participation in the Journal Club will increase members' knowledge of development, evaluation, and implementation of guidelines. Second, that participants will have acquired a better understanding of the research process and how to critique current guideline research. And finally, that members will report that the Journal Club provided the opportunity to facilitate discussions around topics that are less familiar to them. Following each Journal Club meeting, a group member volunteered to lead the next meeting and thus selected articles to be discussed. This voluntary facilitation allowed for flexibility in team members' schedules, without feeling obligated to assume a facilitative role when workloads were heavy. Due to the diverse backgrounds of the Journal Club members, interviewees indicated that it was challenging to select a topic of interest to the entire group. This led to a series of recommendations: anonymously surveying team members as to specific topics of interest, developing guidelines for use during article discussion, and selecting articles with greater medical science themes. Nevertheless, participants did express notable interest in the diversity of the topics brought forward.

Content: Regarding the themes presented in each session of Journal Club, participants were asked to comment on their level of satisfaction with the topics and subsequent selection of articles for discussion (see Figure 1).

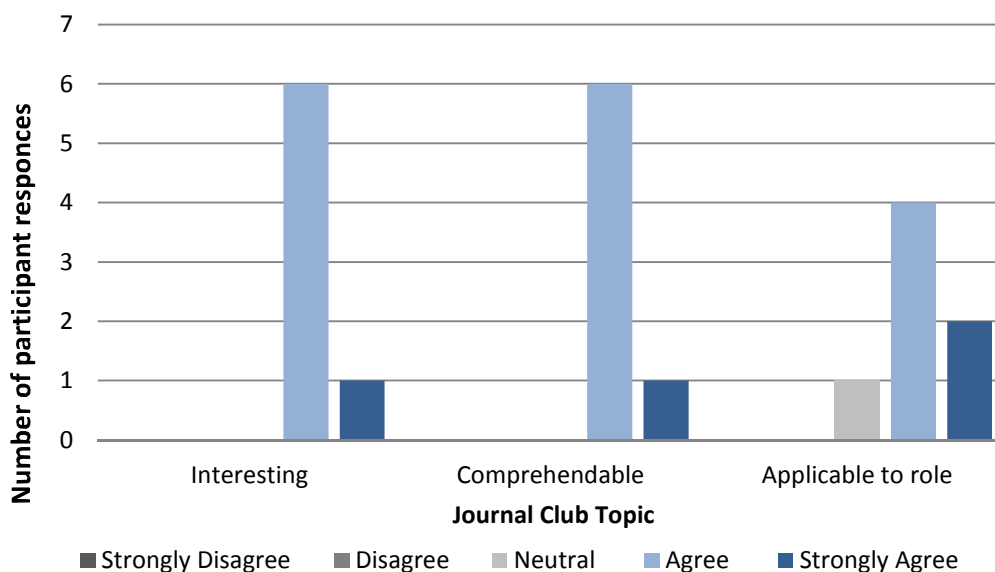


Figure 1. Level of agreement regarding satisfaction with the Journal Club discussion topics.

The overarching purpose of evaluating Journal Club, Johnson's (n.d.) ninth step, was to assess the process, involvement, and impact of this endeavour, in order to determine if the collaborative involvement between knowledge management specialists, nurse facilitators, and an embedded librarian enhanced knowledge sharing, assisted employees in their work, and improved the librarian's understanding of team needs.

Article Selection and Distribution: Choosing an appropriate article for journal club can be a tedious process. A general theme was loosely decided upon before the conclusion of each journal club session, however, there were several aspects that required consideration from article selection to dissemination. Each article was evaluated to ensure it was appropriate for the audience and to determine how the selection of said article(s) would impact a guideline practitioner's work in the field (noting that the librarian is not a content expert). At times, this resulted in a quick search within medical databases and/or journals before a final selection was decided upon. Despite the decision to keep the topic and

subsequent process of identifying article(s) for the next Journal Club rather open-ended, adhering to standard criteria for selecting research articles, as presented in Goodfellow's (2004) paper, is certainly worthy of future consideration. For instance, the desire to determine a specific journal from which articles for discussion are often chosen from, or a pertinent theme, are all decisions that influence the continuation and subsequent success of the journal club. Further, all participants in the Journal Club believe that a committed and dedicated leader made the session worthwhile. Despite these provisions, the literature written on journal clubs does caution that there is no prescribed mandate or guideline for how a journal club should be run.

Buffington, Allen, and Farach (2008) posit a number of factors for determining whether or not a journal club has been successful. These will be examined in relation to the Journal Club. First, a successful journal club should have a minimum two years of existence. At the time of presentation, it will be nearly 20 months since the first session was held. Engagement and desire for the journal club remained high despite two unforeseen circumstances, including a natural flooding disaster that displaced all staff from the Holy Cross Site along with a substantial GURU staffing change. While no sessions were held over the summer months, each participant nonetheless remained active, conducting research, and participating in the evaluation interview. Further, most sessions contained a full contingent of eligible participants, addressing Buffington, Allen, and Farach's (2008) second criteria, namely that more than half of the expected audience should be present at each session.

Often in research endeavors, whether producing an article or reviewing the latest trends in a particular field, examination of the outcomes with respect to the justification of resources and value is undertaken. As Dobrzanska and Cromack (2005) explain, "one way of increasing awareness of current evidence and research findings [sic best practices to improve patient care] is by the introduction of a journal club" (p. 374). When the very idea of launching a journal club was first discussed between the librarian and GURU manager, it was believed that participation in this activity would provide greater understanding in guideline evaluation and development, provide for an opportunity to learn how to critique guideline research, and gain a greater appreciation of the role of grey literature in this venture, particularly as guidelines are, by their nature, a fundamental component of grey literature typology. Further, with one exception, each Journal Club session involved the discussion of no more than two articles. While some facilitators were more lenient than others in allowing certain article discussions to go beyond a pre-determined time allotment, the review of two articles does mirror Aztema's thoughts that a lengthy reading list will undoubtedly lead to "superficial treatment of the studies." (p. 173). Figure 2 describes the participant responses regarding the timeliness of article distribution and the appropriateness of the volume of materials provided.

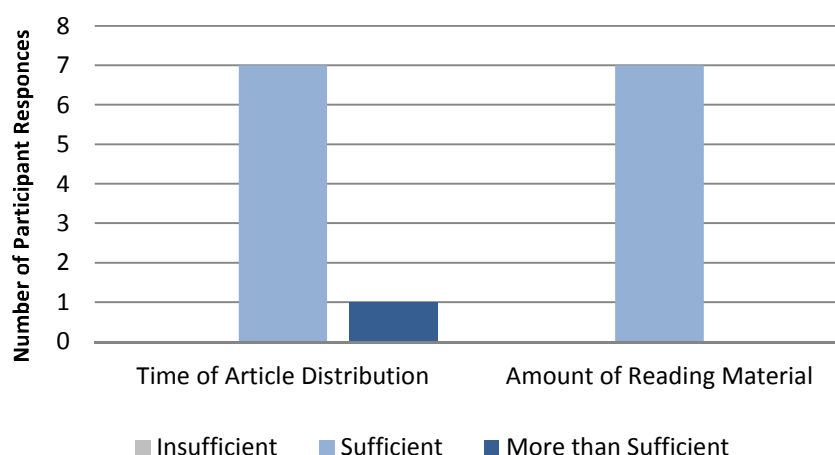


Figure 2. Participant responses regarding timeliness of article distribution and the appropriateness of the quantity of reading material provided.

Impact

When determining the effectiveness of a journal club, Deenadayalan (2008) comments that preparation is essential in ensuring that each meeting runs smoothly and on schedule. When evaluating this trait, it is important to focus on and evaluate lessons learned from the club in lieu of the process of how the club was run (p. 902). Further, as appears to be common practices amongst journal clubs in any discipline, "the initiator of choice of papers was mostly the facilitator..." (p. 903). This aspect may well be the most critical feature of any journal club as article selection and relevance to participants is "a key

element of a successful journal club in order to improve reading and critical appraisal skills and knowledge.” (p. 905).

It was thought that participation in Journal Club could expand the team’s understanding of an embedded librarian’s capacity to assist in their work while also providing the librarian an opportunity to engage with teams in a unique format outside of the routine role. For librarians, involvement in team building and learning may enable them to further understand the needs and focus of the team they assist. In addition, team members may become more aware of how an embedded librarian may facilitate their work. This pilot project sought to explore this relationship in an informal Journal Club format.

Assessing the discussions from the past year’s Journal Club, the librarian compiled a listing of articles which discussed strategies for conducting successful journal clubs. The launching of the Journal Club, and the subsequent monthly meetings, was certainly not a component of any participant’s job description. Further, there was no obligation for a member to attend any or all of the sessions. However, as evidenced by the marked-up pages, the multi-colored highlighting, and the enthusiasm in which the readings were discussed, it was quite clearly evident that all enjoyed partaking in this activity. Devoid of a medical background, the librarian was, in at least a few instances, somewhat overwhelmed by the level of complexity present in some of the articles chosen for discussion. As a result, a second reading “to forage details” (Atzema, 2004, p. 169) was often required, particularly to associate the text with the numerous tables and diagrams that clinical articles often contain. In offering her suggestions on how to read through a paper for journal club, Atzema (2004) presents her perspectives in the IMRAD (introduction, methods, results, AND discussion) format, a method commonly accepted in medical and scientific analyses. While a critical appraisal of the article being discussed was likely never the intent of the Journal Club, critiquing the author’s viewpoints and assessing the quality of writing, in much the same way as guidelines are evaluated, often took place.

Johnson’s (n.d.) vision of a librarian’s role in selecting articles is interesting, yet one that is often true in many journal club situations. According to literature on this topic, it is quite rare that a librarian, particularly one who does not hold a medical background, would be given free-reign, not only to suggest articles/topics of interest for subsequent sessions, but also facilitate and lead meetings. The embedded librarian was very appreciative of being given this opportunity. Journal Club provided an environment for all participants to engage in discussions surrounding subjects both within and outside their area of expertise, as well as learn from fellow colleagues. The opportunity to participate in collaborative, constructive conversation regarding topics allowed team members to share ideas and increase awareness of the knowledge, interests, and opinions of all who participated in Journal Club. This allowed the dispersal of ideas beyond the journal club setting, with several participants commenting that they were able to connect with other GURU team members as well as the embedded librarian to broaden their knowledge base. Thus, even a topic outside of one’s practice area still had a positive impact, albeit indirect: “I think it has improved, in just my background knowledge...the discussion often sparks how we apply it to our roles and cancer care in general and I found it really rewarding and truly enhanced my knowledge...it definitely influences my practice” (Watson, 2013).

Newman (2007) offers a few recommendations on identifying bias and/or potential flaws in the study, as a design error can have a trickle-down effect on the feasibility of any guideline produced. With a cautionary tone, Newman concludes by reminding the reader that “the most important part of the discussion is the ‘bottom line’”. With almost every Journal Club meeting, the discussion was brought full circle, re-emphasizing the key points and generating ideas with respect to applicability to guideline development/implementation. In addition, articles were examined and critically appraised with respect to population size, data analysis, feasibility, general layout, applicability, and so on...

Upon examination of the literature regarding the organization of journal clubs, there does not appear to be a single common guideline detailing the process by which a journal club should run and function (Deenadayalan et al., 2008). In a systematic review of journal club effectiveness reported on by Deenadayalan and colleagues in 2008, “no paper reported on the translation of evidence from journal club into clinical practice” (p. 898). This appears to be a hypothesis that is somewhat open to interpretation, particularly since the entire existence of Journal Club is centered on how the articles discussed in each session better inform guideline developers and tumour group facilitators in interpreting and creating practice guidelines, a very clinically-oriented approach. Further, Deenadayalan (2008) indicates that following an extensive analysis of major medical specialties comprising journal clubs, there was no identifiable journal club devoted to cancer care.

While the participation of a librarian in a journal club is not unique, the level of involvement and engagement with the embedded librarian in Journal Club certainly is. The Holy Cross librarian attended each and every Journal Club since its inception. Members of the GURU team commented that the

librarian was already knowledgeable and more than competent at meeting information needs prior to the establishment of Journal Club. Nevertheless, Journal Club allowed for GURU team members to more clearly understand the librarian's role and established greater comfort when asking for assistance. This involvement increased the librarian's ability to offer enhanced support to the team due to an increased understanding of the team's goals and needs: "I think it helped him with keeping his finger on the pulse of the group. But his influence I think was bigger in terms of just his knowledge of research and literature..." (Watson, 2013).

Despite already hectic schedules, most interviewees were motivated to continue participating in Journal Club. In fact, the opportunity for team building emerged as a key theme throughout the interviews. The ability to network with fellow group members and the embedded librarian, as well as learn about colleagues' background and expertise was seen as a significant benefit of this pilot study. Although educational and research backgrounds varied considerably amongst Journal Club members, this was not perceived as a barrier. In fact, the lack of formality that Journal Club imposed created an environment for open discussion, and all were comfortable discussing topics in an open, non-judgmental manner. While participants did note that a few guidelines surrounding expectations would have been helpful, the relaxed and approachable format of Journal Club enhanced discussion and continued participation well beyond a monthly one-hour timeframe.

Future Considerations

While the Journal Club evaluation period officially ran from April of 2012 until the spring of 2013, meetings are still ongoing. Now that all members have each had an opportunity to facilitate and lead a session, the opportunity exists to expand the journal club concept and invite guest speakers to participate as well. The provincial health structure in Alberta is still relatively new, with Alberta Health Services forming in 2009, and the Knowledge Resource Service this past year. This provides numerous opportunities for Journal Club to partner with new teams, or new journal clubs could take hold across the province, using this pilot study as a guide. Perhaps a virtual approach in the form of a speaker's panel, a successful concept that was tested in the Touchdown Suite in 2011 during Open Access Week is a possibility worth considering.

As with any pilot study of this nature, there are undoubtedly a few limitations that would need to be addressed for future journal club sessions. Although no formal structure was imposed for each session, thus providing the opportunity for open and free discussion, responses received from participants during the interview process indicated that more explicit directions as to the objectives and purpose of this particular journal club would have been helpful. In addition, the Journal Club may gain even greater validity by inviting an executive director (perhaps as guest facilitator) to a future session; if the director deems this activity to be of high value, it will further entice all participants to continue attending, even if attendance is not mandatory. Further, some members stated that a provision of a list of key questions raised from the readings, distributed a few days before a session would have helped guide and critique the articles (Goodfellow, 2004).

Despite the relaxed and informal atmosphere of Journal Club, a few recommendations were brought forth that may further enhance the awareness of guidelines as a fundamental type of grey literature, as well as suggestions on how to conduct future Journal Club sessions. Clearer expectations, perhaps using a set of guidelines for facilitators would allow for greater article description, pre-determined discussion questions, and personal anecdotes of why a particular article was chosen. Further, the composition of Journal Club varied considerably since its launch, due to staff leaves, workplace reassignments, etc. Thus, brief quarterly surveys may better assist facilitators to tailor topics according to group interests. Finally, collaboration, drawing on each other's strengths, is a fundamental pedagogical principle and an excellent way to use networking to increase awareness of a concept, idea, etc. While there were some barriers in play throughout the Journal Club pilot (article storage, workload, and scheduling), enabling the participation of all interested team members will lead to enhanced team building and improved discussion and learning.

In today's field of librarianship, engagement with clients being served is encouraged and highly recommended. Journal Club provided this opportunity, and the findings from this pilot study support the notion that engaging in the intellectual discussions that Journal Club provided greatly impacted each participant's role. Participating in Journal Club thus helped create a better understanding of the value of grey literature in both research and practice, especially in creating, implementing, and disseminating clinical practice guidelines.

References

- Alberta Health Services (AHS). (2013). *Mission & Strategic Direction*. Retrieved November 12, 2013 from <http://www.albertahealthservices.ca/190.asp>
- Australian Research Council (ARC). (2012). *Enhancing the Transparency and Accessibility of Informally Published Research and Information*. Retrieved August 5, 2013 from http://grey-lit-strategies.info/sites/default/files/docs/Grey_Lit_Strategies_ProjectOverview_August2012.pdf
- Aztema, C. (2004). Presenting at journal club: A guide. *Annals of Emergency Medicine*, 44(2), 169-174.
- Buffington, D., Allen, J., & Farach, J. (2008.). *Conducting a Journal Club*. Retrieved November 12, 2013 from <http://copnt13.cop.ufl.edu/doty/pep/buffingtonffw2008.ppt>
- Cave, M.T., & Clandinin, D.J. (2007). Revising the journal club. *Medical Teacher*, 29, 365-370.
- Deenadayalan, Y., Grimmer-Somers, K., & Kumar, S. (2008). How to run an effective journal club: A systematic review. *Journal of Evaluation in Clinical Practice*, 14, 898-911.
- Dobrzanska, L., & Cromack, D. (2005). Developing a journal club in the community setting. *British Journal of Community Nursing*, 10(8), 374-377.
- Goodfellow, L.M. (2004). Can a journal club bridge the gap between research and practice/ *Nurse facilitators Educator*, 29(3), 107-110.
- Guideline Utilization Resource Unit (GURU) (2013a). *Cancer Guidelines*. Retrieved July 22, 2013 from <http://www.albertahealthservices.ca/cancerguidelines.asp>
- Guideline Utilization Resource Unit (GURU) (2013b). *Handbook*. Retrieved July 22, 2013 from <http://www.albertahealthservices.ca/hp/if-hp-cancer-guide-utilization-handbook.pdf>
- Johnson, J. (n.d.). *Ten Steps to Developing a Successful Journal Club*. Retrieved August 14, 2013 from <http://www.freepptdb.com/details-ten-steps-to-developing-a-successful-journal-club-12628.html>
- Knowledge Resource Service (KRS). (2013). *Cancer Guidelines*. Retrieved August 7, 2013 from <http://krs.libguides.com/cancerguidelines>
- Luby, M., Riley, J.K., & Towne, G. (2006). Nursing research journal clubs: Bridging the gap between practice and research. *Medsurg Nursing*, 15(2), 100-102.
- Newman, T. (2007). *Suggestions for Leading a Journal Club*. Retrieved August 20, 2013 from www.epibiostat.ucsf.edu/epidem/personnel/newman_document_repository/JOCLUB_12Jun07.doc
- St. Pierre, J. (2005). Changing nursing practice through a nursing journal club. *Medsurg Nursing*, 14(6), 390-392.
- Strain, K.L. (2011). *Embedded Research Librarianship Pilot Project: Evaluation Report*. Alberta Health Services: Public Health Innovation and Decision Support – Evaluation Team.
- Swift, G. (2004). How to make journal clubs interesting. *Advances in Psychiatric Treatment*, 10, 67-72.
- Watson, L. (2013). *Embedded Librarianship Journal Club Pilot Project: Evaluation Report*. Alberta Health Services: Research and Innovation-Evaluation Team.

Slovak Centre of Scientific and Technical Information **SCSTI**

Achieve
your goals
with us



INFORMATION SUPPORT OF SLOVAK SCIENCE

SCIENTIFIC LIBRARY AND INFORMATION SERVICES

- technology and selected areas of natural and economic sciences
- electronic information sources and remote access
- depository library of OECD, EBRD and WIPO

SUPPORT IN MANAGEMENT AND EVALUATION OF SCIENCE

- Central Registry of Publication Activities
- Central Registry of Art Works and Performance
- Central Registry of Theses and Dissertations and Antiplagiarism system
- Central information portal for research, development and innovation - CIP RDI >>>
- Slovak Current Research Information System

SUPPORT OF TECHNOLOGY TRANSFER

- Technology Transfer Centre at SCSTI
- PATLIB centre

POPULARISATION OF SCIENCE AND TECHNOLOGY

- National Centre for Popularisation of Science and Technology in Society

IMPLEMENTATION OF PROJECTS

- National Information System Promoting Research and Development in Slovakia - Access to electronic information resources - NISPEZ
- Infrastructure for Research and Development - the Data Centre for Research and Development - DC VaV
- National Infrastructure for Supporting Technology Transfer in Slovakia - NITT SK
- Fostering Continuous Research and Technology Application - FORT
- Boosting innovation through capacity building and networking of science centres in the SEE region - SEE Science

Technology Transfer Support on National Level^{*}

Lubomír Bilský, Adriana Shearman, and Miroslav Kubiš

Slovak Centre of Scientific and Technical Information, CVTI SR, Slovakia

Introduction

One of the recent tasks and responsibilities of the Slovak Centre of Scientific and Technical Information (SCSTI) has been to provide technology transfer support to public research organisations on a national level.

For this purpose, the SCSTI has been mandated by the Ministry of Education, Science, Research and Sport of the Slovak Republic to implement a national project, co-financed from the EU structural funds within the Operational Programme Research and Development, entitled the National Infrastructure for Supporting Technology Transfer in Slovakia – NITT SK. The project is focused on building and securing the operation of the national system supporting the technology transfer processes in Slovakia and is implemented over the period June 2010 – December 2014 with a total budget of €8.2 million.

The transfer of knowledge from science to industry, for the benefit of society, will be supported through the complex mechanism, which is currently being developed. A key player in the whole system will be the *National Technology Transfer Centre*, which will co-operate closely with local technology transfer centres established at universities and public research institutions. An important part of the system will be the *National patent fund*, from which financial support for the processes of protecting and commercialising intellectual property will be provided to public research institutions. The financial support will include payments for patent-filing and maintenance (PCT, USPTO, European and national applications), patent attorneys services, patent translations, partner search, marketing, negotiating and licensing. Even at the current moment, patent-filing fees are covered from the state budget in money administered by the SCSTI, while external support services are provided within the NITT SK project. This is a great benefit for the Slovak public and state universities and the Slovak Academy of Sciences, which have been facing a lack of financial means for these purposes.

Concerning the technology transfer activities that are being provided through the NITT SK project, these cover the entire process of transferring scientific knowledge into the practice, starting from intellectual property protection and ending with its commercial utilisation. Services are provided by external high-level experts on relevant technology transfer issues from the respective scientific field. All costs are covered from the NITT SK budget and are free to the scientific community. Specific services include the assessment of intellectual property commercialisation potential, state of the art analyses, patent application preparation and filing, technology marketing, partner searches, negotiation support, preparation of licensing agreements, spin-offs creation, follow-up of royalties' payment and so on. Since 2012, when this support started, some patent applications have already been supported within the NITT SK project.

Last year, the *National portal for technology transfer* was launched within the NITT SK project. This provides a comprehensive overview of technology transfer issues providing services to researchers, students, companies and local TT offices. Useful items provided include sample agreements, internal guidelines and other methodological materials related to technology transfer. It also affords a list of competencies of Slovak R&D institutions and links to relevant Slovak, foreign and international organisations, groups and initiatives.

1. Technology transfer

An important part of the research activities at universities and R&D institutions is finding applications for their inventions and outcomes from research in practical life for the benefit of the society and for the benefit of the institutions and individuals involved in the research. Society can benefit from these inventions e.g. through new jobs created, improved standard of living, health and social care, protection of the environment and cultural heritage and knowledge gained. The benefits for research institutions and researchers could be of an immaterial character (e.g. partnering with private sector companies and collaboration with other research institutions at national or international level, enhancing their reputation with professionals and the general public, increase in the number of students enrolled to study at universities involved in these activities, competitive advantage) and of a material character (e.g. leveraging resources, extending research budgets as a result of participation in research programmes funded by the private sector, additional income for research institutions and inventors from patented and licensed technologies).

^{*} First published in the GL15 Conference Proceedings, March 2014.

The transmission of the new knowledge latent in an invention into practical life proceeds via a somewhat complex process of technology transfer. The definitions and concepts of technology transfer have been discussed in many different ways and they are surrounded by many different interpretations and views depending on the institutions' objectives, research background, stakeholders, research areas and disciplines and underlying perspective (theories) [1,2]. One straightforward definition is that technology transfer is the process of transferring scientific findings from one organisation to another for the purpose of further development and commercialisation [3].

2. Brief outline of background situation in technology transfer in Slovakia

Technology transfer, albeit not known under this name, existed in the former Czechoslovakia. Within its external limitations it was relatively well-established with a network of specialised departments, particularly in research institutes, providing support services. The Slovak Technical Library in Bratislava, the predecessor of the Slovak Centre of Scientific and Technical Information, was the sole institution in Slovakia with a complete collection of Czechoslovak patent documents and a large collection of patent documents from abroad. That this institution celebrates its 75th anniversary this year simply has to be stated at this occasion.

The situation in technology transfer from research institutions changed substantially in Slovakia under the new economic conditions following the establishment of the independent Slovak Republic in 1993. Since then, there has been a need for a systematic and modern approach to technology transfer, in particular from the state-subsidised research institutions (public and state universities, the Slovak Academy of Sciences and public research institutes), in order to make use of the public resources in the most effective manner. The academic community has always been a boundless source of knowledge, experience and skills, imagination and invention, curiosity and speculation, enthusiasm and dedication. However, these positive features, to some extent at least, have been overshadowed by the fact that the awareness of intellectual property rights within the academic community is somewhat low, laws related to intellectual property have frequently been breached with no apparent subsequent consequences and patent application and patent maintenance fees are too high (min €5,365.5 per 20 years) for research institutions to cover; in addition, investigators have tended to work individually rather than institutionally for the private sector who has the funding means and there has been a lack of information and motivation on the part of inventors to be more involved in the research in which they would function more as representatives of a research institution rather than as individuals; also the infrastructural pre-requisites for conducting high-quality research (e.g. instrumentation, software) have been poor. As a result, actual technology transfer has been scarce as also have technology transfer offices and the number of production units as potential collaborators or recipient of applied research outputs have been reduced. The NITT SK project has been put in place to enhance this situation.

3. National Infrastructure for Supporting Technology Transfer in Slovakia – NITT SK project

The major features outlined in chapter 2 characterised the status in technology transfer prior to implementation of the National Infrastructure for Supporting Technology Transfer in Slovakia – NITT SK, the national project, in June 2010. The project with a total budget of €8.2 million is co-financed from the EU structural funds within the Operational Programme Research and Development. Its implementation period is from June 2010 up to December 2014.

Within the implementation of this project, the SCSTI as the principal investigator of the project, has to address and minimise the negative features summarised above, support development of the existing positive features and create the conditions which will facilitate intellectual property protection, technology transfer in its complexity and support the establishment of technology transfer centres or similar departments at those universities that have a high potential for technology transfer. These are important organisational units within the structure of research institutions, since technology transfer is costly, time-demanding and requires expertise in product or technology development, regulatory approval, marketing and sales, all of which are activities different from those expected of researchers.

It is not a coincidence that the SCSTI was mandated by the Ministry of Education, Science, Research and Sport of the Slovak Republic and has been viewed as the institution with the full competence to complete the project successfully. There has been a long-standing tradition in the SCSTI in specialising in patent and corporate literature and other categories of grey literature [4] and also in providing some librarian services related to intellectual property protection and technology transfer, e.g. conducting preliminary state-of-the art search of patent documents and grey literature, translating technical and specialist texts, consulting with and advising inventors on issues of an administrative character and collaborating with the Industrial Property Office in Slovakia. The staff have been trained and educated in these particular fields. They are experienced specialists and some members of the staff are in training as

patent attorneys. A more detailed account of their activities can be found in [5]. Some specific tasks, however, as they are defined in the NITT SK project, can only be fulfilled by externally contracted professionals.

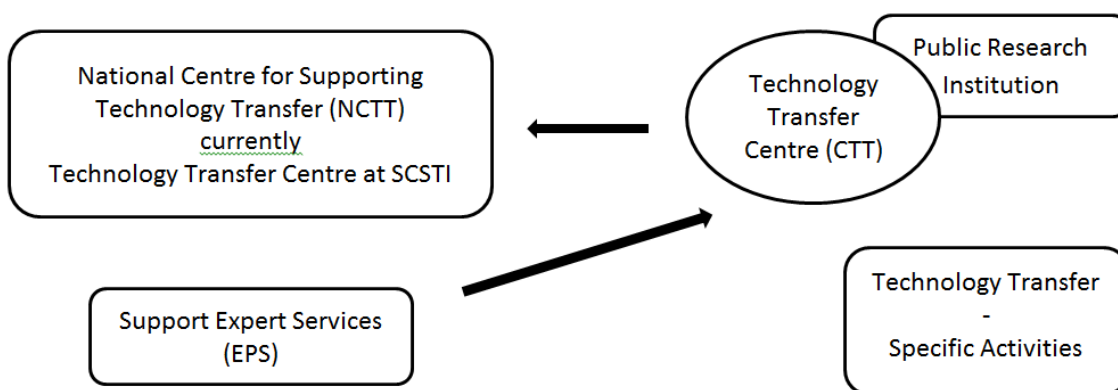
The strategic goal of the NITT SK project is to establish and implement the National System for Supporting Technology Transfer from state-funded research institutions (public and state universities, the Slovak Academy of Sciences and public research institutes) which are the target group of the project. Three specific objectives are fundamental to achieving this strategic goal.

4. NITT SK – Specific objective 1

4.1 National System for Supporting Technology Transfer in Slovakia and National Technology Transfer Centre

Specific objective 1 is to establish and operate the Technology Transfer Centre at the SCSTI, i.e. to provide the Technology Transfer Centre at the SCSTI with human resources and operational capacities and provide auxiliary services in technology transfer to research institutions across the whole of Slovakia. This is the core objective directly related to technology transfer. It creates the conditions and environment for technology transfer in Slovakia to be a meaningful, successful and sustainable process. Its major role is to design and put into operation a mechanism for the *National System for Supporting Technology Transfer in Slovakia (NSPTT)* [6]. The key subject in the NSPTT will be the *National Technology Transfer Centre (NCTT)*. The idea is that the NCTT within the NSPTT will provide public research institutions with all the support services needed to protect intellectual property originating from public research institutions (not individuals) and the subsequent commercialisation of legally protected intellectual property. The NCTT will collaborate closely with local technology transfer centres established at public research institutions. The concept of the NCTT is currently being developed, its most appropriate legal form considered, and its statutes, job positions and processes proposed. The intention is that some of the support expert services will be provided by the NCTT staff in collaboration with a provider, a successful applicant following a public procurement process. The NCTT will also be responsible for maintaining the *National Patent Fund* from which financial support will be channelled to cover patent-filing and maintenance fees (PCT, USPTO, European and national applications), fees for services of patent attorneys, patent translations, partner search, marketing, negotiating and licensing. It is expected that, in addition to the state subsidy, the NCTT members will contribute a certain sum from their royalties to this fund. All issues concerning the NCTT and National Patent Fund are still under consideration. At this stage, some of the tasks of the NCTT are being fulfilled by the Technology Transfer Centre at SCSTI which was established on 21st March 2011.

A schematic representation of activities and relations between the National Technology Transfer Centre, Technology Transfer Centre at SCSTI and local Technology Transfer Centres at public research institutions is provided in the diagram below:



4.2 National Portal for Technology Transfer

The third component is the *National Portal for Technology Transfer (NPTT)* which came into operation in 2012. It aims to be a comprehensive resource of information and issues related to intellectual property protection and technology transfer, serving researchers, students, companies and local technology transfer offices alike.

4.2.1 NPTT – access point to support services

The NPTT is an important channel through which the specific support expert services (EPS) can be ordered and communicated (see also the diagram above). The EPSs form a bundle of highly specialised services of two types – those related to intellectual property protection and those related to technology

transfer. Examples of such services are advising on strategy for intellectual property protection, assessment of intellectual property commercialisation potential, contract-drafting and negotiation, state-of-the art analyses, patent application preparation and filing, technology marketing, partnering, setting up spin-off companies, follow-up of royalties' payment.

To date, 42 requests for support expert services have been submitted from the Slovak Academy of Sciences, Comenius University, Žilinská University in Žilina, the Slovak University of Technology in Bratislava, the Technical University in Košice, the Academy of Fine Arts in Bratislava and the Animal Production Research Centre in Nitra. The services in most frequent demand are assistance with selecting the industrial property of the research institution's portfolio which is suitable for protection (comprising commercial potential assessment, identification of industrial property, industrial property protection feasibility study), preparation and filing of patent and utility model applications, drafting and assessment of agreements, advising in strategy for intellectual property commercialisation and partnering. Due to their highly specialised character, these services are outsourced. The group of services provided by SCSTI specialists comprises search in technological databases (ad hoc or monitoring), search in intellectual/industrial property databases (ad hoc or monitoring, state-of-the art, patentability, competitors, citation, grey literature, etc.) and consultation and assistance in these areas. The first two services are completed by dispatching the respective report to a researcher.

All types of these services are provided to public research institutions without charge with the expert services following the conclusion of an Agreement for the Provision of Support Expert Services. Currently, agreements with six universities, six institutes of the Slovak Academy of Sciences and one agreement with a public research institute have been concluded. The Agreements with three more universities are in the post-negotiation phase shortly prior to concluding. Some EPS services (e.g. patent-filing and maintenance fees) are funded from a special item in the state budget allocated to the SCSTI outside of the NITTSK project budget. To date, patent applications originating from the Slovak Academy of Sciences and one pending patent application from the Technical University in Košice, have been funded from this source.

4.2.2 NPTT – source of template documents

The content of the NPTT website is varied; it covers all possible topics in technology transfer and intellectual property and some categories of grey literature. Templates such as *sample agreements* http://nptt.cvtisr.sk/sk/poskytovane-vzorove-materialy/dohody-zmluvy.html?page_id=539:

- Confidentiality (Non-disclosure) Agreement
- Consulting Agreement
- Research Contract
- Licence Agreement

and sample *internal guidelines*:

http://nptt.cvtisr.sk/sk/poskytovane-vzorove-materialy/smernice.html?page_id=538

- Guideline on Shares in Intellectual Property
- Intellectual Property Fees Guideline
- Guideline on Intellectual Property Administration and Documents Handling
- Intellectual Property Guideline
- Industrial Property Protection Guideline
- Guideline on Protection of Non-registered Industrial Property Exempt from Author's Rights
- Author's Rights Guideline
- Non-disclosure and Confidentiality Guideline
- Intellectual Property Licensing Guideline
- Guideline on Intellectual Property Assignment Agreement can be accessed and downloaded from the NPTT website.

4.2.3 NPTT – source of methodological materials

The NPTT is also intended as a point of education providing access to methodological materials which are another example of the grey literature category. Up to the present, the following researcher's guides are available:

- Intellectual Property and Confidentiality Guide [7]
- Establishment and Operation of University's Technology Transfer Centre Including a Proposal for a Standard Model of Operation [8]
- Academic Materials and Publishing Guide (in preparation) [9]
- Research Contracts Guide (in preparation) [10]

and a series of four educational brochures entitled *Intellectual Property and Technology Transfer* from specialist seminars [11-14].

4.2.4 NPTT – access point to databases and information resources

The NPTT provides access to various databases (e.g. Intellectual Property Offices world-wide, databases of products and services, databases of technologies, experts in technology transfer), information resources (e.g. collections of books on technology transfer and intellectual property and related topics, the purchase of which is funded from the NITT SK projects; journals and e-books from ebrary). Access is also provided to basic information on the research competences of Slovak public research institutions intended especially for networking purposes.

5. NITT SK – Specific objective 2

The aim of Specific objective 2 is to propose, set up and administer for the scientific community an Integrated System of Services (ISS) using information and communication technologies to control access to special scientific databases, integrated software applications and other electronic information resources and services which promote and facilitate technology transfer.

The scientific community will be provided with easy, user-friendly and efficient access via a common platform of Integrated System of Services to high-capacity data storage and high-speed hardware facilities equipped with modern scientific software applications so the researchers can process data from their experiments and store large data sets in a safe environment with guaranteed maintenance. Scientific software applications are purchased by the SCSTI or by the research institutions themselves. Currently, the MATLAB computing software is available to the scientific community. Research-related databases administered by the SCSTI, e.g. SK CRIS (Slovak Current Research Information System) [15], CREPČ (Central Register of Publication Activity), CREUČ (Central Register of Artistic Activity), SciDAP (Central Databases of Slovak Electronic Information Resources on Research and Development), CRZP (Central Repository of Theses and Dissertations) [16] will be integrated in the ISS in due course.

6. NITT SK – Specific objective 3

Specific objective 3 is to raise awareness in the scientific and academic community of intellectual property rights protection and technology transfer and also of the importance of popularising science. Activities within this objective include:

- participation in organising various events of an educational character, such as training, seminars and conferences for representatives of research institutions, scientists, inventors, PhD students and students at universities where they can acquire the basics of intellectual property rights and their protection, technology transfer and present their achievements in applied research,
- dissemination of information on the current status and news in technology transfer and intellectual property rights in Slovakia and in the world by editing and publishing e-TTbulletin. It aims to cover many aspects of the dynamically developing area of technology transfer. This journal is the only e-journal of its kind in Slovakia. The electronic version of the bulletin is available on http://ttb.cvtisr.sk/bulletiny-z-roku-2013.html?page_id=106. The printed version of the bulletin, which is published quarterly, contains some selected and summarised articles from e-bulletin http://nptt.cvtisr.sk/sk/ttb-transfer-technologie-bulletin.html?page_id=282. There have been five issues published up to date. Another means of communicating with the wider public and popularising science is publishing articles or interviews in the Hospodárske noviny newspaper or the Quark journal.
- participation in organising and co-organising research and development- and technology transfer-popularising events, exhibitions displayed on the premises of the SCSTI SR, media programmes on the TA3 TV channel, Regina and VIVA radio stations. The audio or video records of these events are also publicly available on the NPTT website.

Activities proceeding within the individual specific objectives, and within Specific objectives 1 and 3 in particular, are coordinated and often complement each other.

7. NITT SK project as a source of grey literature

Like many other projects, the NITT SK project is a rich source of various categories of grey literature. They have been published as direct outputs of the implementation of the NITT SK project; some categories of grey literature, however, are indirect products of services provided within the NITT SK project. In addition to those already referred to in sub-chapters 4.2.2 and 4.2.3, some further examples of the grey literature categories produced in the course of implementation of the NITT SK project are listed below:

- analytical studies, state-of-the art reviews, questionnaires and reports compiled in the analytical phase of the project which were part of the activities for all three specific objectives of the project. These studies were fundamental for the development of subsequent activities in the NITT SK project [18-27],
- internal methodological materials [28],

- books of abstracts and books of abstracts and presentations from the *Conference NITT SK – Technology Transfer in Slovakia and Abroad (2011– 2013)* [29-32],
- periodical project- monitoring reports,
- decree [33] which replaces a previous guideline on registration of publication activity at universities in Slovakia,
- reports from business trips within the project,
- agreements and contracts concluded with public research institutions and those drafted as part of EPS services,
- promotional materials for conferences, seminars, workshops and exhibitions,
- reports related to industrial property searches as part of EPS services,
- industrial property documentation – applications or patents, utility models, etc. as results of implementation of the NITT SK projects,
- datasets of Slovak Technical Standards.

Activities in the NITT SK project with all its support services will continue to induce knowledge and technology transfer which will consequently lead to an increased production of grey literature. Some categories of grey literature, in particular patent applications and patents granted resulting from research activities at public research institutions, are used as one of qualitative indicators in the evaluating innovative and technology transfer abilities of these institutions [28].

Conclusions

The support activities and services within the NITT SK project are aimed at provision on a national level. So far, 42 requests for support expert services have been processed from 13 public research institutions located in Bratislava, Žilina and Košice, hence encompassing the whole of Slovakia. Three more research institutions from universities in Zvolen, Nitra and Košice will soon be added to this group with more universities and research institutes showing an interest in joining in to capitalise on the benefits and advantages afforded by the NITT SK project. Taking into account that the specialised support expert services have only been in place from March 2013, these figures are high and expectations for the future are promising. A barrier of earlier scepticism on the part of researchers is rapidly dissolving with positive examples attracting more research institutions. This nationwide approach appears to be optimal. To the best of our knowledge, a similar system for supporting technology transfer on a national level with a central Technology Transfer Office is being introduced and developed only in the Republic of Ireland [34].

The trend towards integrating intellectual resources to boost its global competitiveness, harness its knowledge base, enhance its economic position and tackle the great societal challenges of the 21st century is evident in the recent activities of the European Union. Innovation has been the key issue in the Europe 2020 strategy for growth and jobs and mechanisms to strengthen knowledge transfer offices in public research organisations through trans-national collaboration in particular. The European TTO CIRCLE network was established with the aim of linking the major European public research organisations in order to play a collective role in driving changes to the Technology Transfer landscape in Europe, and to boost innovation in Europe through a set of initiatives, including: fostering the use of their knowledge portfolio; sharing best practices, knowledge and expertise; performing joint activities; establishing informal channels of communication with policymakers; organising training programmes; and developing a common approach towards international standards for the professionalisation of technology transfer [35]. This can be seen as another valuable source for networking, knowledge transfer and support not only in establishing technology transfer centres in Slovakia but also in underlying the importance of the National Technology Transfer Centre in Slovakia as a reliable spokesperson and representative of Slovak technology transfer offices.

Where grey literature is concerned, industrial property documentation will be used even more both intensively and extensively as one of the indicators for evaluating the innovation capabilities of research institutions and countries as proposed in Innovation Union Scoreboard 2013 [36].

Acknowledgement

The authors wish to acknowledge the financial support received for the National Infrastructure for Supporting Technology Transfer in Slovakia – NITT SK, national project, from the European Regional Development Fund within the framework of the Research and Development Operational Programme 2007-2013. The authors also wish to thank Eliška Klimentová, Ľubomír Kucka, Olinka Števková and Marián Trgala for their valued comments.

References

- [1] SAZALI, A. W. Defining the Concepts of Technology and Technology Transfer: A Literature Analysis [online]. *International Business Research*. The Canadian Center of Science and Education: January 2012, vol. 5(1), 61-71 [viewed 6 November 2013]. ISSN 1913-9004. Available from: <http://www.ccsenet.org/journal/index.php/ibr/article/view/13847/9501>
- [2] CHOI, H. J. Technology Transfer Issues and a New Technology Transfer Model [online]. *The Journal of Technology Studies*. Epsilon Pi Tau, Inc., 35(1), Fall 2009 [viewed 6 November 2013]. ISSN 1541-9258. Available from: <http://scholar.lib.vt.edu/ejournals/JOTS/v35/v35n1/choi.html>
- [3] ASSOCIATION OF UNIVERSITY TECHNOLOGY MANAGERS. About Technology Transfer [viewed 6 November 2013]. Available from: http://www.autm.net/Tech_Transfer/2979.htm
- [4] SCHÖPFEL, J. Towards a prague definition of grey literature. *The Grey Journal* [online]. GreyNet. Spring 2011, vol. 7(1), 5-18 [viewed 5 November 2013]. Available from: <http://ezproxy.cvtisr.sk:2278/eds/pdfviewer/pdfviewer?sid=aea83b7d-bf53-4d65-979c-205a7a3fbd1f%40sessionmgr113&vid=2&hid=110>
- [5] HARACHOVÁ, M. and L. KUCKA. PATLIB Centre: why are we grey?. In: *Abstracts from 15th Conference on Grey Literature* [online]. Amsterdam: GreyNet, in press [viewed 6 November 2013]. Available from: http://www.textrelease.com/images/Abstracts_Session_Two.pdf
- [6] NOSKOVIČ, J., SMEJA, M. and O. ŠTEVKOVÁ. *Návrh Národného systému pre podporu transferu technológií* [online]. Bratislava: CVTI SR, 2012 [viewed 6 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Navrh_na_NSPTT_FINAL.pdf
- [7] CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. *Duševné vlastníctvo a zachovanie mlčanlivosti. Príručka pre výskumníkov* [online]. Bratislava: CVTI SR, 2013 [viewed 6 November 2013]. Available from: http://nptt.cvtisr.sk/buxus/docs/DV_a_zachovanie_mlcanlivosti.pdf
- [8] BRIGHTON, D., ĎUROVČÍKOVÁ, H. and K. MÜLLEROVÁ. *Metodický postup na zriadenie a prevádzku centra transferu technológií na vysokých školách, vrátane návrhu štandardného modelu fungovania* [online]. Bratislava: CVTI SR, 2012 [viewed 6 November 2013]. Available from: http://nptt.cvtisr.sk/buxus/docs/Metodicky_postup_na_zriadenie_a_prevadzku_CTT.pdf
- [9] CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. *Akademické materiály a publikovanie. Príručka pre výskumníkov*. Bratislava: CVTI SR, 2013.
- [10] CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. *Zmluvy o výskume. Príručka pre výskumníkov*. Bratislava: CVTI SR, 2013.
- [11] ADAMOVIČ, Z., KLINKA, T. and K. MÜLLEROVÁ. *Duševné vlastníctvo a transfer technológií 1* [online]. Bratislava: CVTI SR, 2012 [viewed 6 November 2013]. ISBN 978-80-89354-07-8. Available from: http://nptt.cvtisr.sk/buxus/docs///Dusevne_vlastnictvo_a_transfer_technologii_1.pdf
- [12] ADAMOVIČ, Z. et al. *Duševné vlastníctvo a transfer technológií 2* [online]. Bratislava: CVTI SR, 2013 [viewed 6 November 2013]. ISBN 978-80-89354-09-2. Available from: http://nptt.cvtisr.sk/buxus/docs///Dusevne_vlastnictvo_a_transfer_technologii_2.pdf
- [13] ADAMOVIČ, Z. and J. KRATĚNOVÁ. *Duševné vlastníctvo a transfer technológií 3* [online]. Bratislava: CVTI SR, 2013 [viewed 6 November 2013]. ISBN 978-80-89354-12-2. Available from: http://nptt.cvtisr.sk/buxus/docs///Dusevne_vlastnictvo_a_transfer_technologii_3.pdf
- [14] ADAMOVIČ, Z. et al. *Duševné vlastníctvo a transfer technológií 4*. Bratislava: CVTI SR, 2013.
- [15] ZENDULKOVÁ, D. and J. NOGE. The SK CRIS system as a source of unique information about scientific activities and their outcomes. In: *Abstracts from 15th Conference on Grey Literature* [online]. Amsterdam: GreyNet, in press [viewed 6 November 2013]. Available from: http://www.textrelease.com/images/Abstracts_Session_Three.pdf
- [16] ŽITŇANSKÁ, M. et al. "Gold Value Offer" to Science and Research in Slovakia – is presented by the NISPEZ project and related activities. In: *Abstracts from 15th Conference on Grey Literature* [online]. Amsterdam: GreyNet, in press [viewed 6 November 2013]. Available from: http://www.textrelease.com/images/Abstracts_Poster_Session.pdf
- [17] NOGE, J. and J. KRAVJAR. Central Repository of Theses and Dissertations – A Unique Umbrella Solution for a Significant Category of Grey Literature in the Slovak Republic. In: *Abstracts from 15th Conference on Grey Literature* [online]. Amsterdam: GreyNet, in press [viewed 6 November 2013]. Available from: http://www.textrelease.com/images/Abstracts_Poster_Session.pdf
- [18] LINCZÉNYI, R. et al. *Štúdia I. Analýza súčasného stavu v oblasti transferu technológií v SR a definovanie koncepčných východísk v oblasti TT pre vytvorenie Národného systému podpory TT na Slovensku* [online]. Bratislava: CVTI SR, 2011 [viewed 5 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Studia_I_o_TT_NITT_SK.pdf
- [19] Šipko, S. et al. *Štúdia II. Základné koncepty, nástroje a prístupy k transferu technológií vo svete - prehľadová štúdia* [online]. Bratislava: CVTI SR, 2011 [viewed 5 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Prieskum_poziadaviek_AO_na_sluzby_TT.pdf
- [20] CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. *Vyhodnotenie dotazníkového prieskumu pre definovanie požiadaviek akademickej obce na dodávku externých podporných služieb v procese transferu technológií v rámci implementácie národného projektu NITT SK* [online]. Bratislava: CVTI SR, 2011 [viewed 5 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Prieskum_poziadaviek_AO_na_sluzby_TT.pdf
- [21] SHEARMAN, A. et al. *Hodnotenie potenciálu vedeckých pracovísk v oblasti výskumu, vývoja a transferu technológií s využitím Centrálneho registra evidencie publikačnej činnosti* [online]. Bratislava: CVTI SR, 2011 [viewed 5 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/NITTSK_studia_IV_akt_1_1_CREPC.pdf
- [22] KUBIŠ, M. et al. *Analytická štúdia I - východiská pre vytvorenie integrovaného systému služieb* [online]. Bratislava: CVTI SR, 2011 [viewed 5 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Akt_2_1_STUDIA_I_zeditovana_final.pdf

- [23] KUBIŠ, M et al. *Analytická štúdia II - požiadavky na dodávku špecifických produktov a outsourcingových služieb* [online]. Bratislava: CVTI SR, 2011 [viewed 6 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Akt_2.1_STUDIA_II_zeditovana_final.pdf
- [24] PUTALOVÁ, A. et al. *Štúdia I. Identifikovanie možných nástrojov propagujúcich aktívne využívanie inštitútov ochrany práv duševného vlastníctva vedeckou komunitou v SR* [online]. Bratislava: CVTI SR, 2011 [viewed 6 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Studia_I_final.pdf
- [25] MURÍN, G. et al. *Štúdia II. Možnosti využitia klasických prostriedkov masmediálnej komunikácie pre TT* [online]. Bratislava: CVTI SR, 2011 [viewed 5 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Studia_II_final.pdf
- [26] ORAVCOVÁ, A. et al. *Možnosti využitia najnovších internetových nástrojov na efektívne pôsobenie smerom k vedeckej komunite* [online]. Bratislava: CVTI SR, 2011 [viewed 6 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Studia_III_final.pdf
- [27] TÓTHOVÁ, D. et al. *Identifikácia požiadaviek na integrovaný redakčný systém pre webové sídlo Národný portál pre transfer technológií a pre tvorbu a vydávanie elektronického bulletinu venovaného problematike výskumu, vývoja a transferu technológií* [online]. Bratislava: CVTI SR, 2011 [viewed 6 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/Studia_IV_NITT_3_1_final_20110531.pdf
- [28] BILSKÝ, Ľ. et al. *Metodika hodnotenia kvality vedeckých pracovísk v oblasti výskumu, vývoja, inovácií a transferu technológií* [online]. Bratislava: CVTI SR, 2012 [viewed 6 November 2013]. Available from: http://nitt.cvtisr.sk/buxus/docs/METODIKA_Hodnotenie_kvality_VV_pracovisk_1.pdf
- [29] CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. *Zborník abstraktov z podujatia Konferencia NITT SK 2011 Transfer technológií na Slovensku a v zahraničí. Book of Abstracts from Conference NITT SK 2011 Technology Transfer in Slovakia and Abroad*. Bratislava: CVTI SR, 2013. ISBN 978-80-89354-19-1.
- [30] CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. *Zborník abstraktov z podujatia Konferencia NITT SK 2011 Transfer technológií na Slovensku a v zahraničí. Book of Abstracts from Conference NITT SK 2011 Technology Transfer in Slovakia and Abroad*. Bratislava: CVTI SR, 2013. ISBN 978-80-89354-17-7.
- [31] CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. *Zborník abstraktov a prezentácií z podujatia Konferencia NITT SK 2011 Transfer technológií na Slovensku a v zahraničí. Book of Abstracts and Presentations from Conference NITT SK 2011 Technology Transfer in Slovakia and Abroad*. Bratislava: CVTI SR, 2013. ISBN 978-80-89354-16-0.
- [32] CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. *Zborník abstraktov z podujatia Konferencia NITT SK 2013 Transfer technológií na Slovensku a v zahraničí. Book of Abstracts from Conference NITT SK 2013 Technology Transfer in Slovakia and Abroad*. Bratislava: CVTI SR, 2013. ISBN 978-80-89354-18-4.
- [33] *Vyhláška MŠVVaŠ SR č.456/2012 o centrálnom registri evidencie publikačnej činnosti a centrálnom registri evidencie umeleckej činnosti*.
- [34] GOVERNMENT OF THE IRISH REPUBLIC. *Putting public research to work for Ireland Policies and procedures to help industry make good use of Ireland's public research institutions* [online]. Enterprise Ireland, 2013 [viewed 11 November 2013]. Available from: http://www.enterprise-ireland.com/EI_Corporate/en/Research-Innovation/Companies/IPP-Putting-public-research-to-work-for-Ireland.pdf
- [35] THE EUROPEAN COMMISSION. Enterprise and Industry. *Innovation Union Scoreboard* [online]. 20 September 2013 [viewed 11 November 2013]. Available from: http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm
- [36] THE EUROPEAN UNION. *Innovation Union Scoreboard 13* [online]. The European Union, 2013 [viewed 11 November 2013]. ISBN 978-92-79-27583-8. Available from: http://ec.europa.eu/enterprise/policies/innovation/files/ius-2013_en.pdf

Federal GL System Input Flow Analysis^{*}

Aleksandr V. Starovoitov, Yuri M. Bogdanov, Aleksandr M. Bastrykin,
Anton I. Borzykh and Leonid P. Pavlov

Centre of Information Technologies and Systems of Executive State Authorities, CITIS, Russia

Abstract

The procedures of collecting, processing and disseminating information on research and development (R&D) reports and theses in Russia are specified by the federal-level grey literature (GL) information system introduced into production use at the Centre of Information Technologies and Systems of Executive State Authorities (abbreviated in Russian as CITIS). The continuity of input document flow is secured by the federal law "On the obligatory copy of documents". The quantity of arriving documents is important from both theoretical and practical points of view: it reflects the scientific activity of academic community and an executive discipline of scientists; it determines the distribution of workload over time and the completeness of the federal collection. In the paper the system's input flow analysis is presented based on statistical records of many years. Numerical data in relative and absolute values are given.

In the Russian Federation the practices of legal deposit are spread over the most informative documents of grey literature (GL) – scientific and technical (or research and development, R&D) reports and theses. The practices are supported by the federal law "On the obligatory copy of documents" and the term "the obligatory copy of documents" is used in Russian synonymously to "legal deposit". The procedures of collecting, processing and disseminating information on research and development (R&D) reports and theses are specified by the federal-level grey literature (GL) information system introduced into production use at the Centre of Information Technologies and Systems of Executive State Authorities (abbreviated in Russian as CITIS).

The system's main information resource is the collection of two types of documents: 1) primary documents - full-text R&D reports and theses (candidate and doctoral dissertations, according to Russian tradition); 2) secondary documents - information cards (IC) containing the bibliographic description and abstracts (metadata) of the full-text documents. The information card for reports is similar to those used in the USA (NTIS Report Documentation Page, Standard Form 298) but more extended containing more than 30 fields as compared to nearly 20 fields in Form 298. Besides IC there is another type of cards arriving in the system – registration cards (RC) that are filled in by the performing organization in the beginning of every scientific work or project and usually showing if a full-text report should be prepared in the end of the research.

The essential characteristic feature of the system is that it functions in the waiting conditions when the volume of processed information, the system's load, is entirely dependent on the external factor – the volume of the input document flow.

Because of the legal deposit regulations and nation-wide coverage of the system its input flow of arriving documents is manifestly indicative of the general situation and processes in Russian science and technology.

The quantity of arriving documents is important from different points of view: it determines the distribution of workload over time and the completeness of the federal collection; it reflects the scientific activity of academic community and an executive discipline of scientists. Therefore a quantitative input flow analysis is both of theoretical and practical interest. In this paper we will consider neither content of arriving documents nor their quality standard – this would require a separate study. But in many aspects quantitative data are significant without respect to document quality: the computer power and human efforts needed to process a document do not depend on the document's scientific level as well as the collection to be complete must include all the issued documents no matter what their scientific importance is and only in case of complete collection its quality monitoring would allow to reveal that the situation in this or that science subject or research institution is up to the standard or needs improvement.

Some factors of the information flow dependence are common to the entire 45-year history of records, some are typical for a particular period of the system's functioning.

It is possible to distinguish four main factors having an influence on the input flow:

- seasonal,
- organizational,
- financial,
- legal and disciplinary.

^{*} First published in the GL15 Conference Proceedings, March 2014.

Seasonal factor is the most evident system's input flow peculiarity: the flow is, so to say, regularly uneven. The cycles of flow peaks and low input are repeated within every year in the same months during decades and are expected to remain so as long as the traditional starting and finishing dates for scientific works exist in Russia. As a rule, the documents defining the finishing terms of scientific research and development works (contracts, agreements, plans, etc.) suppose either half-yearly (that is, in June) or yearly (in December) reports. The same is true for theses: the peaks of dissertation presenting are in November-December and in May-June. December finishing gives arrivals peak in February-March because in January there are 10-day New Year and Christmas holidays in Russia (Orthodox Christmas is on January 7th) and the peak of summer arrivals is May-July. During the peak months the input flow increases on the average two times as compared to other months and during the peak three-four months about 50% of the yearly flow arrive at the system. The system is supposed to be adaptive to processing the peak volumes of arriving documents still keeping within the time-limits of the existing regulations. The cyclic input flow changes within the year should be considered normal since they are determined by the calendar economic and financial cycles typical for all the countries.

Besides this cyclic recurrence it happens that some more general factors influence the flow from time to time, typically once in several years, resulting in a temporary downfall or, on the contrary, a rise in the flow. The influence of these factors is evident in the yearly arrivals diagrams we are considering below. Such factors may have organizational, financial or legal and disciplinary nature and must be taken into account when planning the system's workload and forecasting an expected input flow.

The organizational factor may in turn be of administrative or technological nature. The administrative reorganizations or reforms are not so rare a phenomenon and theoretically are always aimed to improve the situation, be it in economy or science. Practically this is not always so, in any case if their positive effects need a long period of time to become evident the negative effects sometimes appear much sooner. For example, the merger or division of ministries, the reorganizations of dissertation councils responsible for awarding scientific degrees often result in an unnatural drop or upsurge in the amount of arriving documents. The technological reorganizations or, rather, modernizations of the system like introducing the networking and online modes of operation always give positive effect in the rise of the incoming flow.

The financial factor is the most evident and straight one. When the funding of scientific research grows more contracts for research and development are concluded resulting in more reports prepared and presented to the system. And vice versa, the input flow decreases when the financial situation deteriorates. Mention should be made that the state, or federal budget funding still accounts for about 70% of the total science expenditures in Russia.

The last but not the least, **legal and disciplinary factors** play an important role in the flow regulation. The high level legal documents like Federal laws and Government decisions are fundamental in ensuring the completeness of the document flow and collection. The Federal law defining the legal deposit regulations has been acting since 1994 and concerns both the reports and dissertations. In respect to dissertations the existing rules of scientific degree conferment based on the Federal law and following Government decisions ensure practically 100% delivery of all the required dissertation documents (full-texts and information cards) to the system. Because the authors of dissertations cannot be given the degree without presenting the documents to the Federal GL system this disciplinary factor proves to be the strongest one and works perfectly during all the years of statistical records. Unfortunately, as far as reports are concerned the situation has not been so perfect and due to the lack of the executive discipline the completeness of the report flow varied from approximately 85% at best to 40% at worst. The sanctions against the organizations that violated the law were very weak and the motivations to observe the law in this respect were also not strong. Only recently the situation has been improved when several Government decisions were issued that connected the delivery of reports to the system with some financial privileges for the scientific organizations. For example, the organization can enjoy a reduced tax rate only if it has timely delivered all the necessary report documents to the Federal GL system.

Before getting down to the commenting on the statistical records of the yearly document arrivals it is convenient to divide the input flow history into three periods following the division into periods of the newest history of Russia. The fact is that the absolute values of the arrivals differ greatly for each of the periods not because of the factors listed above (that did work within the periods) but because of much stronger, so to say, extra-GL general factors of political and economic nature that affected the very existence of the country.

In this connection we distinguish:

- Soviet period (1967 – 1991);
- Transition period (1992 – 2000);
- Modern period (2001 – 2012).

1. Soviet period (1967 – 1991)

The period is started with the year of the system's development – 1967, but the first stable statistical records belong to 1969 – and ends in 1991, the year of the Soviet Union disintegration. Of course, technologically that was quite a different system (by the way, the first database was created on a General Electric computer made in France) but the types of arriving documents were the same. The yearly document arrivals for the Soviet period are shown in Table 1.

Table 1. Yearly document arrivals: Soviet period

Years/Doc. types	Registration cards (RC)	Information cards (IC)	R&D reports (full-text)	Dissertations (full-text)	Total (per year) ^a
1969	47500	35900	26500	21000	151900
1971	85000	72500	51170	28830	266330
1974	71670	83300	59700	28700	272070
1976	99160	105000	72300	16330	309120
1977	83300	89170	63300	16700	269170
1979	91700	106160	85500	21670	326700
1981	126258	153595	126167	21817	449654
1982	96785	122618	102897	25537	373374
1984	90021	122732	98546	24120	359539
1986	140786	177024	135817	23826	501279
1987	102746	125788	95562	24660	373416
1990	70614	97414	63602	29628	290886
1991	58968	94939	61128	27934	270903
1992	21527	28570	13417	25995	115504

First of all what strikes one's eye when looking at the data is very impressive absolute figures – several hundred thousand documents, an order of magnitude more than during next periods. Of course, the figures are given for the USSR; for the Russian Federation they were about 25% less because of the arrivals mainly from Ukraine and Belorussia and also from the Caucasian, Central Asian and Baltic Republics. The high volumes of the input flow reflect the situation when the Soviet Union was not integrated into the world economy and had to develop its own industry and a wide front of scientific research including all the branches of science and technology. In accordance with the planned economy the 100% state funding of science was regular and stable on the level of 3,5% of the gross national product. The completeness of the flow was secured by a well-organized structure of scientific and technical information departments at research organizations responsible for R&D reports preparation. The executive discipline in respect to delivering the reports to the GL system was high as the Government decisions to do so were strictly observed and controlled. The regular periods of economic development were determined by 5-year plans that also fixed the dates of scientific works starting and finishing. The peaks of arrivals are evident for the final years of 5-year plans – 1976, 1981 and, the absolute record for all times so far, 1986 (more than 500 000 documents totally).

There are more information cards than full-text reports arriving since some contracts allow that there is no full-text report in the end of research but the information card only. This is also true for the other two periods. The fact that there was more information cards than registration cards in the Soviet period can be explained by the existed practice to prepare several reports for each stage of one registered work or project.

^a When calculating the values of this column the amount of dissertations must be doubled since each full-text document is compulsorily accompanied by the information card

2. Transition period (1992 – 2000)

This is the notorious period of the country's general crisis characteristic for the transition from the planned to market economy. Inevitably, the process badly affected all the sphere of science and technology, all kinds of scientific institutions and activities. The yearly document arrivals for the Transition period are shown in Table 2.

Table 2. Yearly document arrivals: Transition period

Years/ Doc. types	Registration cards (RC)	Information cards (IC)	R&D Reports (full-text)	Dissertations (full-text)	Total (per year)
1992	21572	28570	13417	25995	115504
1993	11438	11823	5820	14685	58451
1994	10456	8740	4760	13005	49966
1995	7665	6514	4380	9090	36739
1996	13304	11852	8260	12375	58166
2000	13879	11101	6400	24453	80286

The document arrivals data for the period reflect quite well how painful and dangerous the situation in science was. Because of the general political and economic crisis enveloped the whole country all the factors – organizational, financial, legal and disciplinary - combined in their negative influence to result in such low records. The organizational and legal disorder was amplified by the financial collapse. Instead of the Soviet 3,5% of the GNP science funding dropped to 0,5% of the GNP in 1993 and to 0,3% in 1996. In 1992-1996 the basic research expenditures of the Russian Academy of Sciences dropped 10 times [1]. And instead of total 500 000 documents in 1986 the flow sank to less than 40 000 in 1995.

Even the dissertation activities that are individual and creative in nature and less dependent on the external factors suffered greatly from the general situation of the nineties. Instead of typical for many years amount of presented dissertations around 25 000 this figure dropped twice in the years of 1993-1996 and reached the absolute minimum of 9 090 dissertations in 1995.

Thus, the main reasons for the dramatic fall of the flow during this period were the abrupt suspension of scientific research funding so that most of scientific works stopped and the decline of executive discipline in scientific organizations so that even the completed reports were not always sent to the system.

3. Modern period (2001 – 2012)

Chronologically this period began with entering the third millennium when there was a certain economic stabilization in Russia and the period still continues. The year of 2012 is just the latest year which we have completed data for. The yearly document arrivals for the Modern period are shown in Table 3.

Table 3. Yearly document arrivals: Modern period

Years/ Doc. types	Registration cards (RC)	Information cards (IC)	R&D Reports (full-text)	Dissertations (full-text)	Total (per year)
2000	13879	11101	6400	24453	80286
2004	13000	10800	6500	25460	81220
2008	14982	10536	6899	25226	82869
2010	21100	15300	11000	24700	96800
2011	31000	19600	14500	24780	114660
2012	32798	19860	14360	31229	129476

The general characteristic feature of the period is the positive dynamics in the flow of arrivals. It reflects several important measures taken to improve the situation in science using organizational, financial and legal instruments. The reformatory processes are still in progress: a radical reform of the Russian Academy of Sciences took the shape of a new law in September this year. Let us see how the taken measures are mirrored in the input flow.

First, there has been a growth in scientific research state budgeting every recent fiscal year (except the year of 2009 when because of the world economic crisis the state budget of Russia was sequestered including the item of science expenditure). If during the transition period the funding of

science decreased then during the decade of 2002 – 2012 the state budgeting grew 10 times (from 31 billion rubles to 328 billion rubles) [2]. No doubt, this factor influenced the growth of the input flow.

Next comes the factor of introducing new technologies. In 2011 there was 50% growth in registration card arrivals (from 21100 in 2010 to 31000) and 30% growth in information card arrivals (from 15300 in 2010 to 19600) mainly because of the implementation of the online mode for filling-in the cards in screen forms and inputting them to the system in network conditions. Now 100% of cards are completed and entered online. The fact that now the amount of information cards lags behind that of registration cards indicates that something goes wrong: either several registered works were only started and not finished or if finished the reports and information cards don't arrive at the system.

During the modern period there are two noticeable advances in the arrival of full-text reports. In 2010 the amount of reports grew to 11 000 (from about 7 000 in previous years) to a great extent due to the introduction of a new paragraph in the text of a standard contract for the performing of a scientific project. The paragraph obliged all the performing organizations to deliver the report documents (full-text with IC or only IC) to the GL system. The next leap in 2011 (to 14500 reports) can be accounted for the administrative measures taken by the Russian funds for scientific and social research support that also obliged all the grant winners to register and deliver their report documents to the GL system.

The amount of dissertations remains stable around approximately 25 000 per year. The upsurge of 2012 is likely because it was announced that in 2013 there would be a radical reorganization and reduction of the Dissertation councils (which has really been carried out this year) and many people made haste to present their dissertations before reforms in 2012.

In conclusion it must be said that the input document flow to the federal GL system is indicative as a mirror showing general processes and conditions in Russian science and technology. The characteristics of the flow may be used to suggest what should be done to improve the existing situation in respect to increasing both the absolute amounts of prepared documents and the completeness of the arriving reports flow.

References

1. Commentary to the Federal Law "On science" (In Russian). Online Law Information System "Garant" (by subscription).
2. On science funding. <http://www.interfax.ru/russia/txt.asp?id=273344> (In Russian). Visited Nov. 9, 2013.

Grey Communities A Scientometric Approach to Grey Literature, In and Outside of GreyNet^{*}

Hélène Prost and Joachim Schöpfel (France)

Abstract

The paper explores grey communities outside the Grey Literature Network Service (GreyNet) and identifies potential members for GreyNet. GreyNet can be compared to a Learned Society or a special interest group specialised in grey literature as a particular field of library and information sciences (LIS). Its relevance is related to its capacity to enforce the terminology and definition of grey literature in LIS research and publications, and its impact and outreach can be assessed through the proportion of experts dealing with grey literature and connected with GreyNet. From five databases (Web of Science, Scopus, LISTA, Pascal and Francis) and from open repositories we selected 2,440 papers on grey literature published between 2000 and 2012 by 5,490 authors. Publishing features, preferred journals and the number of publications per author are described for the whole sample. For a subsample of 433 authors strongly committed to grey literature, we present data on geographic origins, place of work, scientific domain and profession. We discuss the characteristics of grey communities in and outside of GreyNet and suggest strategies for the further development of the network.

Introduction

In 2012, the Grey Literature Network Service (GreyNet)¹ celebrated its 20th anniversary, with nearly 300 contributors from 30 different countries. In recent years, GreyNet has directed its activities towards open access through the launching of OpenGrey, and the creation of the GreyNet LinkedIn group marked its entry into social networks. The activities of GreyNet, such as workshops, summer schools, curriculum development, best practices, discussion list, publications and conferences, contributed to the creation and development of a subject community by means of shared terminology, tools, events, experiences and topics.

GreyNet can be compared to a Learned Society specialised in grey literature as a particular field of library and information sciences (LIS). However, it is different from an academic group insofar as it is not confined to LIS but also reaches out to include information professionals and scientists from other disciplines (social sciences, computer sciences, law, economics...). In fact, GreyNet is more a kind of special interest group that recruits experts from the field of grey literature in order "to facilitate dialogue, research, and communication between persons and organisations (and to) to identify and distribute information on and about grey literature in networked environments" (GreyNet web site).

The relevance of GreyNet is related to its capacity to enforce the terminology and definition of grey literature in LIS research and publications, and its impact and outreach can be assessed through the proportion of experts dealing with grey literature and connected with GreyNet. In other words, if we want to evaluate the success of GreyNet as a community-creating structure and its potential for future development, we need to know the degree of GreyNet to attain and aggregate all (or at least a significant number of) scientists, academics and information professionals interested in the field of grey literature and contributing to its knowledge.

Our definition of community is pragmatic and follows the sociological approach to science (Kuhn 1962, Latour & Woolgar 1979). We consider a scientific and/or professional community as a social group with interaction and communication, common practice, identity and values, and shared interests, definitions and language (see Callon 1989, Schrecker 2006 or Paganelli 2012).

Our study builds on three other papers on scientific and professional members of GreyNet. In 2005, we analysed the citations of the first five conferences on grey literature (Schöpfel et al., 2005). This first paper defined the "stakeholders" as "those authors who focus their research and writing on the topic of grey literature (...) referred to as the meta-authors on grey literature" and identified 152 authors and co-authors of 139 papers. The citation analysis of 1344 records and 1721 authors or corporate authors revealed that roughly one quarter of these cited authors matched with the "meta-authors on grey literature" of GreyNet, and that another quarter "(...) deals (dealt) with grey literature, but does (did) not explicitly adhere to the term".

Four years later, when the new *OpenGrey* service² (formerly *OpenSIGLE*) was launched, Farace et al. (2009) defined the grey community as the "250 authors/researchers in the GL-Conference Series" and described the integrating role of GreyNet and the new open repository. The paper also mentioned two groups of potential interest for further development, i.e. the former EAGLE member institutions and "new stakeholders in Grey Literature" whoever this may be.

^{*} Revised text, first published in the GL14 Conference Proceedings (2013), entitled "Grey Communities : an empirical study on databases and repositories".

More recently, Marzi (2012) highlighted the particular relationship between terminology and community. She compared the usage of specific terms and the syntactic complexity of the proceedings of the GreyNet conference to social networks (Facebook) and subject-based communities (LinkedIn) and focused on “supporting relationships and content sharing”. Her conclusion was that subject-based collections such as the proceedings offer a more “coherent flow of shared and structured knowledge” than social networks but that subject-based communities such as the GreyNet group on LinkedIn can nevertheless contribute to “knowledge building and informative flow”, if there is a “strong interaction between medium and content (as in subject-based community exchanges)”.

Obviously, sharing common research interests, belonging to a group, attending the same events and speaking the same language are key factors for the definition of a community. GreyNet without a doubt is such a community, with an accepted terminology, reference definitions, social events and vectors of communication.

But if it is relatively easy to determine the core grey community based on membership, publishing behaviour and conference attendance, the frontier between inside and outside the community is hard to find. Surely, often enough we can read on Twitter or elsewhere questions like “what does grey literature really mean?” Often enough we can guess that outside of GreyNet the “inside-terminology” is not really in use and that grey literature remains a rather obscure topic, not quite clear, not well known. On the other hand, we can also observe that other scientists and professionals from LIS or other domains publish about/on grey literature. Sometimes they apply the concept of grey literature together with the definition of GreyNet, sometimes they don’t for instance, when an article about PhD theses does not mention their grey character.

We were interested in the boundary (should we say continuum?) between inside and outside of the GreyNet community. This time we have not tried to define this boundary through citation analysis (= which authors are working together? Who cites whose publications?...) but through the analysis of usage of terminology and choice of topics. Who uses “grey literature” as an object of research and publication? Who works on documents belonging to grey literature without applying the term “grey literature”?

Our expectation is that this double approach may provide evidence of the outreach and impact of GreyNet beyond its community and of its potential for further development.

Methodology

The first step was a search for publications on grey literature in selected scientific databases. The search was conducted in March and April 2012 in five databases (table 1), applying three criteria:

Document type: The search was limited to published papers.

Time period: We considered documents published between 2000 and 2012.

Content: We searched for references that contain “grey literature” or variants in the title, abstract or keyword fields. Subsequently, we added references on PhD theses or Master dissertations.

The exact approach for each database is described in Appendix 1. The results were cleaned and consolidated. Cited publications and documents published by GreyNet (TextRelease³) were discarded (Table 1).

Source	Owner	Nb of references	Search date
LISTA	Ebsco	465	4/10 2012
Scopus	Elsevier	1,412	3/31 2012
Web of Science	Thomson	1,206	4/1 2012
Pascal/Francis	INIST	129	3/31 2012

Table 1: Databases with search results

We then conducted the same research in different open access directories and search engines (DOAJ⁴, OpenDOAR⁵, ROAR⁶, E-Lis⁷, OAister⁸) but only the results from E-Lis were satisfying and relevant while the other tools were not specific enough (no limitation to the time period, to search on fields except full text and/or to published documents). Therefore, we only added the references from the E-Lis directory (Table 2). Again, these references were cleaned and consolidated, and GreyNet publications were discarded.

Source	Owner	Nb of references	Search date
E-Lis	RCLIS/CIEPI	124	4/4 2012

Table 2: Open access directory E-Lis with search results

The references from all sources were uploaded to a unique database. Again, double entries were eliminated, references were cleaned and consolidated. The final database contains 2,440 references and allows for three analyses:

- Study on the publication patterns: the study was conducted in order to know more about these references on grey literature – document types, publication years, preferred journal titles.
- Study on authors: the study was conducted in order to describe this community publishing on grey literature outside of the GreyNet, in particular their institutional affiliation, geographical origin, preferred journals and other vectors of communication.
- Comparison with GreyNet community: The GreyNet community (inside) is defined based on the authors who usually publish in the GreyNet newsletter, in *The Grey Journal*, or in the proceedings of the annual conferences on grey literature partially available in the *OpenGrey* repository. The list was downloaded in April 2012 from the TextRelease web page called “WHOIS in Grey Literature 2012”⁹. Together, this corpus (i.e. the GreyNet community) accounts for 296 members, more or less involved, active and publishing. Our comparison was conducted in order to better understand the specificity of the grey community, its boundaries, outreach and potential.

Results

The corpus of publications on grey literature and/or PhD theses or Master dissertations contains 2,440 references. As mentioned above, these references were retrieved from six different sources. No reference was available in all sources but some are listed in two or three sources; for instance, 762 references (30%) are indexed in both Web of Sciences and SCOPUS databases. All references from GreyNet sources (*The Grey Journal*, GL conferences) were discarded.

50% of the references contain “grey literature” in the title, keywords or abstract while another 49% of the references mention PhD or Master theses (dissertations etc.) in their metadata.

12% of all references can clearly be identified as belonging to scientometrics or bibliometrics, mostly citation analysis.

The results are presented in two stages. First we describe publishing features, preferred journals and the number of publications per author for the whole sample of 2,440 and 5,490 authors. This first part is followed by a more detailed analysis of geographic origins, place of work, domain and profession with a subsample of 433 authors who are strongly committed to grey literature.

Whole sample

Publishing features

82% of the references are from journal articles. Yet, about 18% are from other document types, such as theses or conference proceedings (Table 3).

Document type	Nb of references	in %
Articles	1,990	81.6%
Conference papers	201	8.2%
Theses, dissertations	4	0.2%
Books, sections or reviews	82	3.3%
Others, n/a	163	6.7%
	2,440	100%

Table 3: Document types (n=2,440)

Roughly 8,4% of the papers on grey literature and PhD theses are published and disseminated as grey literature while 82% are “mainstream” article publishing, probably mostly by commercial academic publishing houses.

The scope of our study was limited to papers published between 2000 and 2012. Figure 1 shows the distribution of the year of publication.

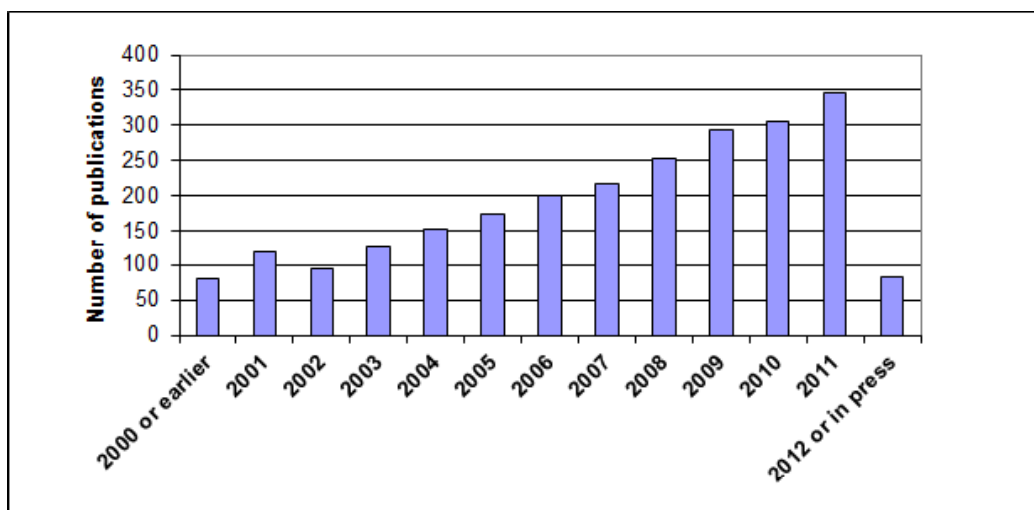


Figure 1: Year of publication (n=2,440)

The median age of publication is four years. 30% of the papers were published during the last two years (2010-2012) or are in press.

More than 36% of all papers were published in medical or public health journals while another 27% appeared in journals from library and information sciences or magazines from the publishing and book trade industry. The other papers were published in different disciplines, for instance in education, computers, biology or psychology.

Preferred journals

Academic journals are still the most important vector for scientific communication. Which titles do scientists and professionals prefer for the submission and publishing of their papers? Our sample provides two different answers.

Articles that mention grey literature in their titles are most often published in LIS journals (Table 7).

<i>Publishing Research Quarterly</i>
<i>Archaeologies</i>
<i>Journal of the Medical Library Association</i>
<i>Interlending and Document Supply</i>
<i>Library Hi Tech News</i>
<i>Collection Building</i>
<i>Journal of Academic Librarianship</i>
<i>INSPEL</i>
<i>Science and Technology Libraries</i>
<i>Documentation et bibliothèques</i>

Table 4: Ten preferred journals (grey literature in article title)

The high ranking of *Publishing Research Quarterly* can be explained by a former agreement with GreyNet that gave permission to PRQ to re-publish the best papers from the international conferences on grey literature.

In 2010 *Archaeologies* published a special issue on grey literature in archaeology that may at least partly explain the second place on the list.

Considering the whole sample and not only the articles with “grey literature” in the title, other titles appear to be as important if not more important than the cited LIS journals (Table 5).

<i>Cochrane Database of Systematic Reviews</i>
<i>Publishing Research Quarterly</i>
<i>Journal of Advanced Nursing</i>
<i>Journal of Academic Librarianship</i>
<i>College & Research Libraries News</i>
<i>Health Policy</i>
<i>Library Hi Tech News</i>
<i>Technical Services Quarterly</i>
<i>Journal of English for Academic Purposes</i>
<i>Chinese Journal of Evidence-Based Medicine</i>

Table 5: Ten preferred journals (all references)

Our data show that journals in medical science and public health (nursing) regularly publish papers that build on grey literature and/or theses and dissertations as valuable sources for literature reviews, scientometric analyses or state of the art contributions. Yet, these journals correspond to about 10% of all articles, and the complete list of journals with articles on grey literature, theses and dissertations is much longer and contains nearly 1,300 different titles. This in other words, means that these publications are more or less scattered in a significant number of journals.

Number of authors

128 references (5%) are anonymous papers and/or without information (n/a) about the author(s). The remaining papers are signed by 5,490 different individual authors. Most of them signed only one paper (88%). The others published two (9%), three to five (3%) or up to fifteen papers (Figure 2).

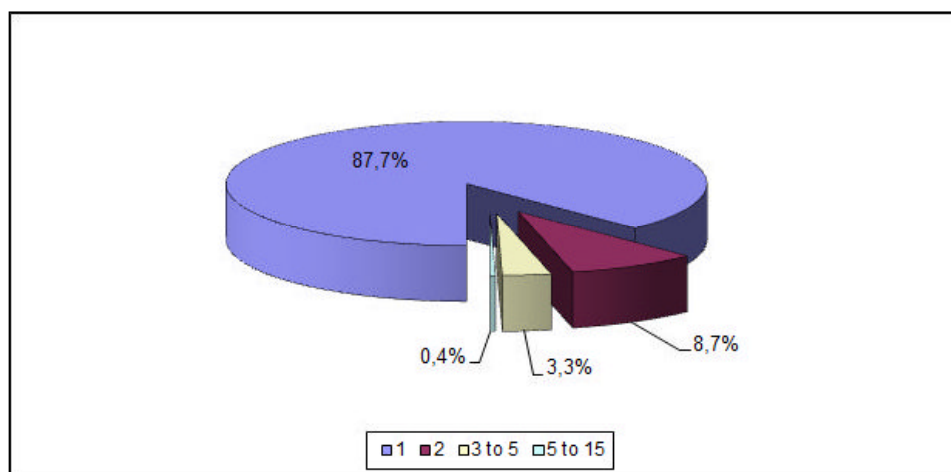


Figure 2: Proportion of authors with number of publications (all authors, n=5,490)

All these authors are in some way committed to grey literature or related subjects. Yet, as we were interested in those authors strongly committed to grey literature, we selected a subsample based on two criteria: authors with at least three papers (i.e. 199 authors or 3.6% of the whole sample), and those with at least one paper that mentions “grey literature” in the title. This subsample of authors strongly committed to grey literature contains 432 individuals and one committee of authors (GLISC), that is 8% of the initial sample.

Subsample of authors strongly committed to grey literature

Altogether, these 433 authors have published 550 papers on grey literature and/or PhD theses or Master dissertations.. One quarter of their papers mention “grey literature” in the title. Nearly 13% of the papers present results from scientometric studies.

Geographic origins

Half of these authors are from Europe; another third are from North America (Figure 3).

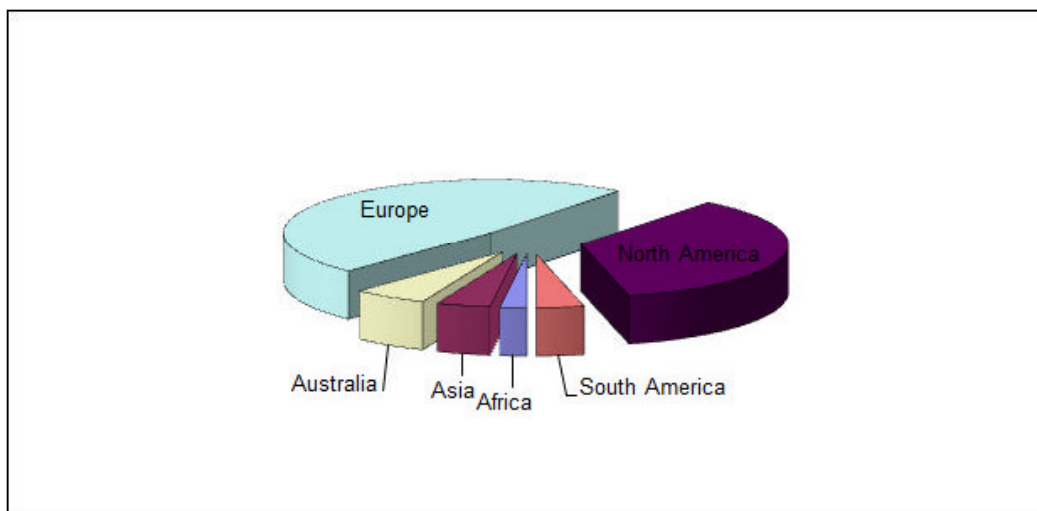


Figure 3: Geographic origins of authors (n=433)

Even if the authors are concentrated in Europe and North America, all continents are represented. Nevertheless, there is no BRICS effect, at least not in this sample.

Place of work and domain

Where do the authors work, which are their professional domains? Unsurprisingly, most of the authors (68%) come from Higher Education, mainly from universities, sometimes from schools. Another 17% are working in research organisations (laboratories, institutes...). The others are working in hospitals, government agencies, non-profit organisations or corporate companies. 4% are from more important and independent libraries, such as INIST, etc. (Figure 4).

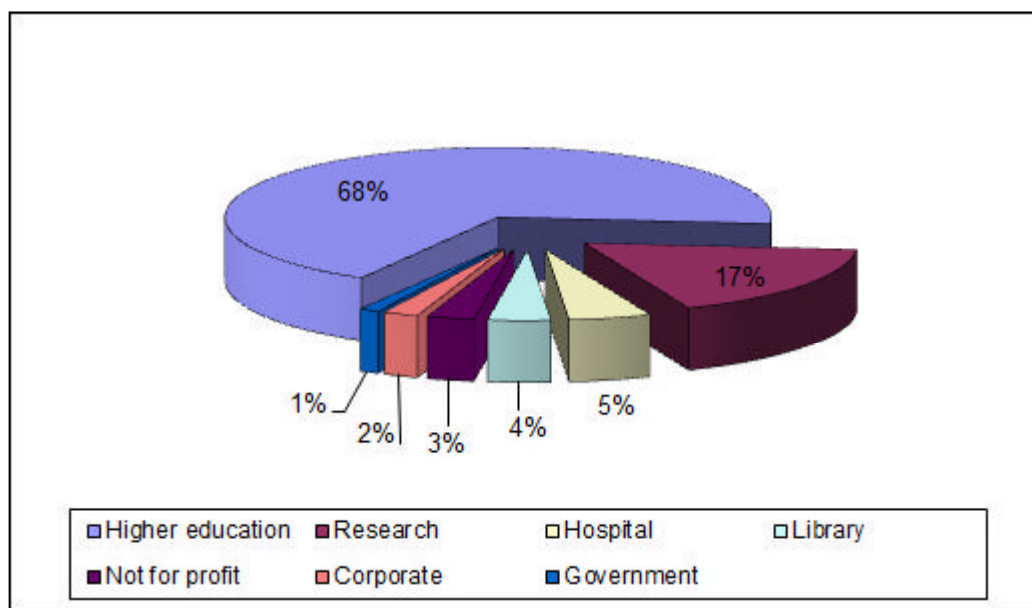


Figure 4: Place of work of authors (n=433)

In which domain are they working? We tried to identify their scientific or professional disciplines from their affiliation or other related information. 40% are working in structures of medical sciences and health, in hospitals or universities, followed by structures in library and information sciences (27%), often in universities (Figure 5).

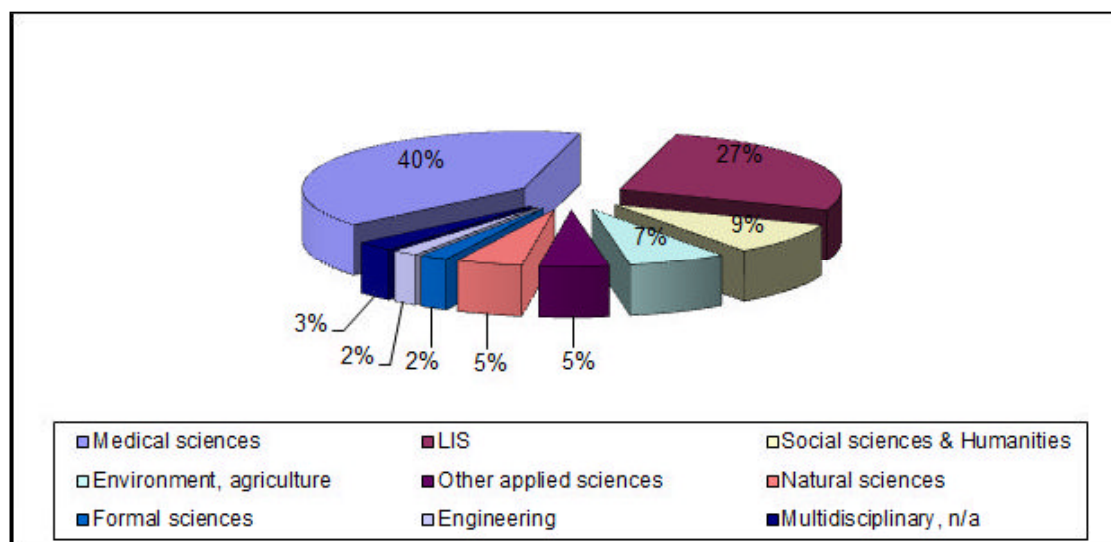


Figure 5: Scientific and professional domains of authors (n=433)

Other significant domains are social sciences and humanities (9%) and environment (7%) while only 5% of the authors are working in disciplines related to natural sciences.

Profession

What are the jobs of the authors publishing about grey literature? More than two thirds are librarians in different functions and settings. Another 25% are scholars teaching Library and Information Sciences at universities or working in research structures (see Figure 6).

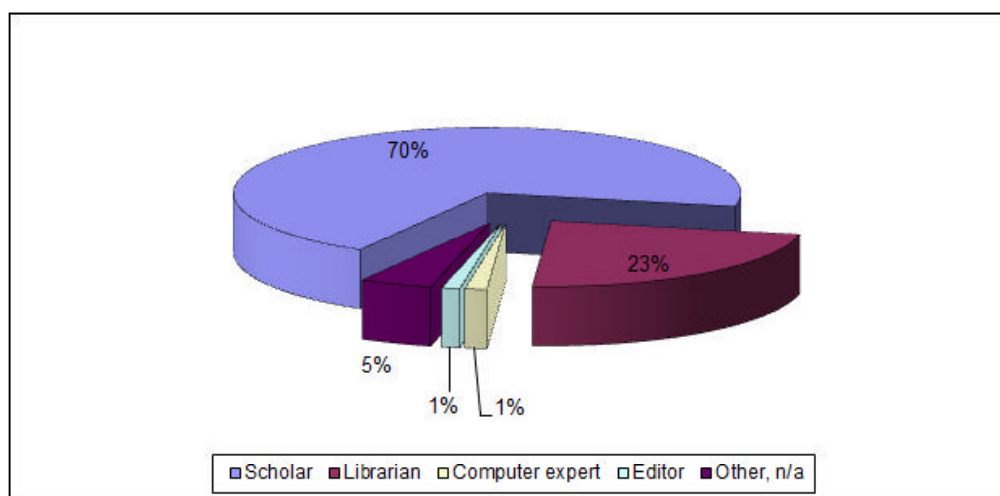


Figure 6: Profession of authors (n=433)

A very small number are computer experts, editors, consultants etc. For others, it was impossible to determine the profession. Most of the academics are teaching Library and Information Sciences while the scientists are often from medical research.

Overlap with GreyNet

Are these authors members of the GreyNet community? Are they listed in the WHOIS, members of the LinkedIn group, authors of papers communicated at a GL conference? We tried to find out by comparing the different samples.

First, we compared the GreyNet community (296 individuals) with our sample of 5,490 authors. 81 people belong to both. This means that 27% of the GreyNet community are represented as authors on grey literature in our initial large sample, but only 1.5% of the authors occasionally writing on grey literature belong to the GL network (sample 1 in figure 7).

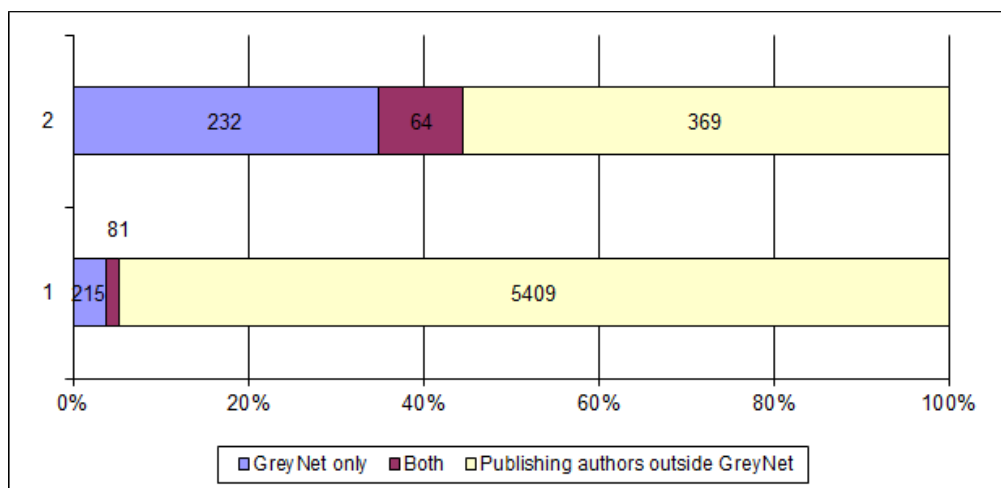


Figure 7: Publishing authors and GreyNet community (sample 1 n=5,490 authors; sample 2 n=433authors)

Secondly, we limited our comparison to the smaller sample of 433 authors more strongly involved in publishing on grey literature. 64 people are in both communities (sample 2 in Figure 7). Again, this figure means that about 22% of the GreyNet community publish outside of the network and are engaged in grey literature while 15% of these authors are members of the GreyNet community.

The comparison between the two samples 1 and 2 shows that the more an author publishes on grey literature, especially when mentioning the term “grey literature” in the title, the more likely it is for him/her to be a member of the GreyNet community.

But these figures also mean that 70-80% of the members of GreyNet are not identified in databases and repositories as occasional or regular publishers on grey literature or related issues.

Outside of GreyNet - same or different?

85% of the authors strongly committed to grey literature (n=369 of 433) do not belong to the GreyNet community. Are they different?

The comparison of the two groups in our sample of 433 authors shows that the GreyNet authors are not represented in Africa, South America and Australia. Authors from outside of GreyNet represent 36 countries (Figure 7) while GreyNet authors are from only 12 countries.

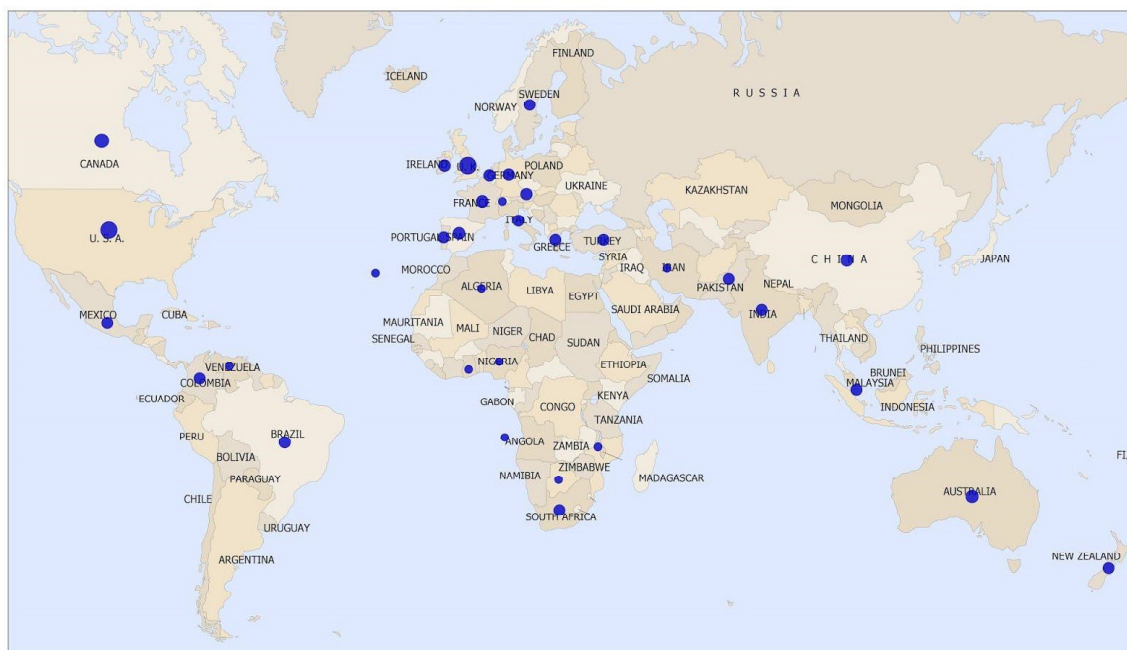


Figure 8: Geographical origin of authors outside of GreyNet (n=369)

Columbia, Mexico, Portugal, Greece, Austria, New Zealand, Pakistan and Turkey are countries so far beyond the reach of the GreyNet. At least this is so in this sample of authors strongly committed to grey literature and publishing more than others.

With regards to the other aspects, we can identify some other differences between GreyNet members and the other authors. For instance:

- GreyNet is less academic than the author sample.
- Research structures, non-profit organisations and libraries are better represented in GreyNet than outside.
- In GreyNet, LIS and natural sciences are better represented, while medical sciences, ecology, applied sciences and social sciences and humanities are underrepresented.
- The relationship between scholars and librarians is completely inverted. Publishing GreyNet members in our study are mostly information professionals while the majority of the publishing community outside of GreyNet is working in Higher Education or research organisations.

These results show two communities which, despite shared interests, are rather different, with a more consistent profile for the GreyNet community.

Discussion

Methodological shortfalls

Our choice to evaluate terminology (grey literature) and choice of topic (theses) as indicators for belongingness to a community is not exhaustive. Also, this kind of scientometric analysis depends partly on the quality and consistency of abstracting and indexing services of databases and repositories and also on the quality and relevance of their search tools and results. Missing search facilities for instance reduced the number of open access directories and most probably the number of identified publications and authors. Also, we had to apply different search strategies (see Appendix) that probably increased inconsistency in the corpus and eliminated relevant items.

Another problem shared with other scientometric studies is the author identification because of misspelling, changes or variants of the first and/or last name and so on. Because of missing person or author identifiers, the consolidation and validation were done manually, a procedure that decreases the reliability of the results.

The same remark applies to the analysis of geographical origins, affiliations and domains of activity. We tried to control this source of error through double-checking and, in some cases, by eliminating the reference or author from the sample. This may reduce the error rate but at the same time decrease the relevance of the overall results.

Grey community or grey communities?

A subject community, as defined above, shares terminology, tools, events, experiences and topics. The “grey community” should therefore share the basic terminology of grey literature, should attend the same events (conferences, workshops, other meetings), make use of the same tools of communication (journals, listservs...) and research (methodology), and discuss the same topics. But does it?

Drawing on our empirical evidence, we can distinguish different groups (Table 6).

Name	Number	Comments
GreyNet	296	Coordination and management by GreyNet Amsterdam and TextRelease.
GreyNet publishing outside	81	The “visible” part of GreyNet outside of the GreyNet events and communication vectors. More information professionals.
Occasionally publishing on GL	5057	One or two papers in ten years, no usage of grey literature terminology. All disciplines.
In 433 authors sample, Regularly publishing on GL with GL terminology	149	Three or more papers. SS&H, LIS. More scholars.
In 433 authors sample, Regularly publishing on GL without GL terminology	31	Three or more papers. Medical sciences. All disciplines. More scholars.

Table 6: Concentric and overlapping groups

These groups are not exhaustive, and we could add others such as:

- GreyNet members attending events,
- GreyNet authors publishing occasionally,
- Groups regularly publishing on grey literature with scientometric approach,
- Groups occasionally publishing on theses,
- Subgroups according to disciplines, organisation or profession, etc.

Some of these groups are defined mainly by practice (publishing features, attendance to events etc.), others by usage of terminology and methodology (citation analysis, grey literature definition etc.) or are mixed.

Probably, members of some groups would not have any problem to identify themselves as part of a “grey literature community” while others would probably prefer to define their affiliation by means of a scientific discipline or a profession.

In and outside of the community

One does not need to use Eskimo words to describe different kinds of snow. As Molière’s *Bourgeois Gentilhomme* discovered with delight, one can speak prose without knowing it. And one can publish about grey literature without using the term, or even without awareness of it. We included in our sample papers on theses as a significant and central part of grey literature. We obtained two subsamples, one with references that explicitly mention “grey literature” in the title or in other header information; the others are papers on theses that may or may not mention “grey literature” in the body of the text.

In the complete sample of references, the GreyNet authors represent 15%. But when we consider only the references with “grey literature” in the header information, this proportion increases up to more than 40%. On the other hand, when we consider the subsample on theses, the percentage of GreyNet authors decreases to 8%. This means that GreyNet authors when publishing outside of the GreyNet use the grey literature terminology more often but they do not do it in a consistent way. And this means also, that this terminology is known outside of GreyNet but not generally accepted or explicitly used when studying grey literature such as theses.

Comparison between the two samples of authors (the 433 authors and the others) against the two communities (GreyNet and outside) reveals another significant difference. The statistical distribution of the usage and non-usage of the grey literature terminology across these groups is significantly different from the expected values (Table 7).

	GreyNet		Outside		Total
	Terminology	No terminology	Terminology	No terminology	
433 authors	64	0	336	33	433
Others	<i>14</i>	3	3549	1491	5057
Total	78	3	3885	1524	5490

Table 7: Usage of grey literature terminology in header across the author samples

The figures in bold are higher than expected, and the figures in italics are lower than expected. In other words: Authors from GreyNet but also from outside who are highly committed to grey literature significantly use the term “grey literature” more often than the others when describing their work. Compared to less committed authors, we can speak of a terminology-based community.

One reason for the differences may be that while GreyNet authors (mainly librarians from all disciplines and LIS academics) often choose grey literature as their object of research (Library and Information Sciences), authors outside of the GreyNet (mainly academics from different disciplines) include specific types of grey items in citation analysis or reviews (state of the art), in particular in medical or life sciences, without having a global concept of grey literature.

Our empirical data tend to confirm the reality of two grey communities, with relatively closed frontiers between inside and outside of GreyNet - only 3.5% of all papers are co-authored with somebody “from the other side”. Obviously in the complete sample we cannot speak of some kind of freedom for the movement of ideas, projects and publications across this border. In so far as both are working with the same material, is this a problem? Perhaps not, as long as mutual understanding and exchange remain possible. Yet, the concept of grey literature draws a framework for research and practice and allows for a better understanding of a specific kind of scientific and technical communication. Therefore, the use and promotion of “grey literature” terminology is all but trivial, not only inside the GreyNet community but also and above all outside of the community.

Conclusion

As we stated at the beginning, a community builds on shared terminology, concepts and practice, such as common methodology and events. Our empirical data indicate the existence of different shades of grey communities, with regards to GreyNet membership, publishing features and usage of terminology. Nine out of ten authors appear to be “bouncers” during the observed period 2000 to 2012, occasionally speaking of grey literature or using grey material. Only one out of ten authors can be considered as a kind of “returnee”, with a kind of loyalty and respectful behaviour regarding grey literature.

The analysis of 2,440 papers published by 5,490 authors confirms that the concept of grey literature remains more or less a professional affair applied by librarians and LIS academics. The papers can be mapped in three concentric circles: at the core, some studies on grey literature as an object of research, followed by a group of papers with a conscious and direct use of the concept. The third and largest circle contains papers that make usage of grey items, with or without awareness of the concept of grey literature.

Thus, the data show a potential for the development of the GreyNet community beyond the actual and often tight frontiers. We conclude with two possible strategies for the development of GreyNet, one based on proximity, the other on exploration.

Proximity

The first strategy is centred on authors outside of GreyNet with a profile adjacent to that of GreyNet members. This calls for contact as a priority:

- Authors who mention grey literature in the header information of their paper.
- Librarians and other information professionals, scholars from library and information sciences.
- Authors of papers published since 2008.

Contact could be established in order to invite publications for *The Grey Journal* or a monograph, to suggest communications for the GL conferences, and to invite to join the GreyNet listserv etc.

Exploration

The second strategy focuses on specific groups of authors that are not necessarily very near to GreyNet but nevertheless in (some kind of) grey literature. For instance:

- The Networked Digital Library of Theses and Dissertations (NDLTD), an international organization dedicated to promoting the adoption, creation, use, dissemination, and preservation of electronic theses and dissertations.
- Other library sections dedicated to special collections, acquisition policy and institutional repositories.
- Identified authors from Latin America, Sub-Saharan Africa, Australia or the BRICS countries.
- Identified authors of papers on grey literature (citation analysis, case studies etc.) in medical sciences.

Here, contact could be made in order to suggest joint publications or events, keynote addresses to GL conferences, or invitation to join the GreyNet listserv etc.

Beyond the community

These strategies could be implemented with the help of the GreyNet group on LinkedIn. This group already radiates beyond the traditional frontiers of GreyNet. Presently (November 2013) it has 328 members, and only around twenty of them usually publish in the GreyNet newsletter, in *The Grey Journal*, or in the proceedings of the annual conferences. Here, the GreyNet community clearly has the potential to expand and to enhance its impact.

However, radiating beyond the community can also mean publishing on grey literature in other media and products, editing special issues related to grey literature not only in LIS journals but also in selected journals from other disciplines that are usual “consumers” of grey literature (medical sciences, social sciences and humanities...), and fostering joint research and publishing projects between professionals and academics.

Integrating authors near to GreyNet, exploring other communities and reaching beyond the GreyNet community could be three different but complementary ways to promote and foster sustainable development of this network.

Bibliography

- Callon M. (1989). *La Science et ses réseaux: genèse et circulation des faits scientifiques*. Paris, La Découverte.
- Farace, D. (2011). What the Future holds in Store for GreyNet International, Business Report Amsterdam, TextRelease. http://www.greynet.org/images/Business_Report_2011.pdf
- Farace, D., Frantzen, J., Stock, C. et al (2009). OpenSIGLE, Home to GreyNet's Research Community and its Grey Literature Collections: Initial Results and a Project Proposal, in *GL10 Tenth International Conference on Grey Literature: Designing the Grey Grid for Information Society*. Amsterdam, 8-9 December 2008. http://archivesic.ccsd.cnrs.fr/sic_00379643
- Kuhn T.S. (1962). *The Structure of Scientific Revolutions*. University of Chicago Press, Chicago.
- Latour B. & Woolgar S. (1979). *Laboratory life: the social construction of scientific facts*. Sage Publications, Beverly Hills.

Marzi C. (2012). 'Knowledge Communities in Grey'. *The Grey Journal* 8(1):27-33.

Paganelli C. (2012). 'Recherche en SI. Analyse des discours sur la notion d'« usage » dans deux revues en sciences de l'information : Doc-SI et BBF'. *Documentaliste* 49(2):64-71.

Schöpfel, J., Stock, C., Farace, D. (2005). Citation Analysis and Grey Literature: Stakeholders in the grey circuit, in *GL6 Sixth International Conference on Grey Literature "Work on Grey in Progress"* New York Academy of Medicine Conference Center New York City, 6-7 December 2004. http://archivesic.ccsd.cnrs.fr/sic_00001534

Schrecker C. (2006). *La communauté: histoire critique d'un concept dans la sociologie anglo-saxonne*. L'Harmattan, Paris.

All web sites were accessed in November 2013.

Appendix

For each data source, we preferred if available the advanced search interface, eliminated double entries and references from the GreyNet (The Grey Journal, GL conference series etc.), and limited the results to the time period mentioned above (2000-2012).

OALster was accessed through the OCLC WorldCat but the results were not specific enough. We could not search in the LISA database because we had no access. We did not consider the results from ROAR and OpenDOAR because of missing search functionalities. The search results were much too large and without interest for our study.

The table shows the search strategies. After some exploratory tests, we decided to limit the search in the following way/manner:

- Grey (or gray) literature in the title of the publication.
- Grey (or gray) literature in the abstract.
- Grey (or gray) literature in the keywords.

In order to produce some information about authors dealing with grey literature but not using the concept of grey (or gray) literature, we also searched for papers on theses and dissertations, excluding biographical papers.

Corpus	Extraction
LISTA	all txt contains "grey literature" or "gray literature" or dissertation or "master thesis" or "doctoral thesis"
Scopus Grey	Title abstr keyword contains "grey literature" or "gray literature"
Scopus Thesis	KW contains thesis or Title contains doctoral dissertation
WoS Grey	Topic contains "grey literature" or "gray literature"
WoS Thesis	Title contains dissertation or "master thesis" or "doctoral thesis"
PASCAL and FRANCIS	All text contain "grey literature" or "gray literature"
E-LIS	All metadata & Full Text contain "grey literature" or "gray literature", or subject = "H. Information sources, supports, channels > HB. Gray literature" or "master thesis" or "doctoral thesis"

All references were cleaned and consolidated, and GreyNet publications were discarded.

¹ GreyNet home page <http://www.greynet.org/>

² OpenGrey home page <http://www.opengrey.eu/>

³ TextRelease home page <http://www.textrelease.com/>

⁴ Directory of Open Access Journals home page <http://www.doaj.org/>

⁵ Directory of Open Access Repositories home page <http://www.opendoar.org/>

⁶ Registry of Open Access Repositories home page <http://roar.eprints.org/>

⁷ Open Archive for Library and Information Science home page <http://eprints.rclis.org/>

⁸ Union catalog of millions of records representing open access resources, search interface at <http://oaister.worldcat.org/>

⁹ <http://www.textrelease.com/whois2012.html>



Tenth Anniversary Special Offer!

TGJ Volume 10, Issues 1-3, 2014

☐ Print ☐ PDF ☐ Password = €240 subscription

TGJ *27 Thematic Issues* 2005-2013

☐ Print ☐ PDF ☐ Password = €540 set price

TGJ Back Issues 2005-2013

☐ Print ☐ PDF = € 80 per issue

TGJ Volume 9, Number 1, Spring 2013
TGJ Volume 9, Number 2, Summer 2013
TGJ Volume 9, Number 3, Autumn 2013

☐ Adapting New Technologies for Grey Literature
☐ Tracking Grey Literature Across Disciplines
☐ Improving Grey Literature through Innovation

TGJ Volume 8, Number 1, Spring 2012
TGJ Volume 8, Number 2, Summer 2012
TGJ Volume 8, Number 3, Autumn 2012

☐ Social Networking and Grey Literature
☐ Data Frontiers in Grey Literature
☐ Managing Change in Grey Literature

TGJ Volume 7, Number 1, Spring 2011
TGJ Volume 7, Number 2, Summer 2011
TGJ Volume 7, Number 3, Autumn 2011

☐ Transparency in Grey Literature
☐ System Approaches to Grey Literature
☐ Research and Education in Grey Literature

TGJ Volume 6, Number 1, Spring 2010
TGJ Volume 6, Number 2, Summer 2010
TGJ Volume 6, Number 3, Autumn 2010

☐ Government Alliance to Grey Literature
☐ Shared Strategies for Grey Literature
☐ Research on Grey Literature in Europe

TGJ Volume 5, Number 1, Spring 2009
TGJ Volume 5, Number 2, Summer 2009
TGJ Volume 5, Number 3, Autumn 2009

☐ Paperless Initiatives for Grey Literature
☐ Archaeology and Grey Literature
☐ Trusted Grey Sources and Resources

TGJ Volume 4, Number 1, Spring 2008
TGJ Volume 4, Number 2, Summer 2008
TGJ Volume 4, Number 3, Autumn 2008

☐ Praxis and Theory in Grey Literature
☐ Access to Grey in a Web Environment
☐ Making Grey more Visible

TGJ Volume 3, Number 1, Spring 2007
TGJ Volume 3, Number 2, Summer 2007
TGJ Volume 3, Number 3, Autumn 2007

☐ Grey Standards in Transition and Use
☐ Academic and Scholarly Grey
☐ Mapping Grey Resources

TGJ Volume 2, Number 1, Spring 2006
TGJ Volume 2, Number 2, Summer 2006
TGJ Volume 2, Number 3, Autumn 2006

☐ Grey Matters for OAI
☐ Collections on a Grey Scale
☐ Using Grey to Sustain Innovation

TGJ Volume 1, Number 1, Spring 2005
TGJ Volume 1, Number 2, Summer 2005
TGJ Volume 1, Number 3, Autumn 2005

☐ Publish Grey or Perish
☐ Repositories - Home2Grey
☐ Grey Areas in Education

***Check the appropriate box(es) above, complete your name and address information.
Return via fax, email, or post. An invoice will then be forwarded directly to you!***

Your Name, Address, and Email

GreyGuide - Guide to Good Practice in Grey Literature: A Community Driven Open Resource Project^{*}

Stefania Biagioni and Carlo Carlesi (Italy)

Joachim Schöpfel (France)

Dominic Farace and Jerry Frantzen (The Netherlands)

Abstract

The goal of this project is to develop an open source repository of good practices in the field of grey literature. That which originated in monographic form will now open and expand to include content from the global grey literature community. Such practices will range from the production and processing of grey literature through to its distribution, uses, and preservation. The repository will contain guidelines such as those in handling theses and dissertations, how to write research reports, metadata required for working papers as well as good practices in the subject areas of agriculture, health, education, energy, environment, et cetera. The purpose of an online repository of good practice in grey literature will provide the many stakeholders in government, academics, business and industry with the benefits of experience, sustained management, and proven results.

The procedure initially applied in this project deals with the design and development of a template that will capture data and information about published as well as proposed good practices within a standard format. While the metadata captured in the template are indeed standardized, their accompanying full-text documents need not be. Furthermore, the template seeks to identify intended users of a good practice, as well as metadata that will facilitate the search and retrieval of records in the repository. Technical developments related to the design and construction of the repository, its eventual platform as well as its maintenance are other related issues addressed in the project. While there are no direct costs associated with the project, each partner is committed to allocate human and material resources needed to carry out their related tasks.

It is expected that the initial phase in acquiring records for the repository will rely on channels available through the Grey Literature Network Service. Populating the repository will be somewhat time-consuming and the first harvest will not produce an abundance of records. The project is long term; however it is all the more worthwhile. The GreyGuide will provide a unique resource in the field of grey literature that is long awaited and which responds to the information needs of a diverse, international grey literature community.

Background

The lead-up to the GreyGuide can perhaps be traced back to the Seventh International Conference on Grey Literature (Nancy, 2005) entitled "Open Access to Grey Resources". At this conference, a proposal was adopted for uniform requirements in the production of grey literature reports¹. The following year, the Grey Literature International Steering Committee, GLISC² was established and GreyNet became one of its first members. Some years later, a monograph was published containing seventeen chapters each mirroring a good practice in the field of grey literature³. In that work, one particular chapter dealing with teaching grey literature offered recommendations for best practices in grey literature education⁴. Since then, one can also find on GreyNet's LinkedIn Discussion Group⁵ persons who are either in search of a good practice or who are eager to alert the group to a particular practice they consider of value in the field of grey literature. In early 2013 and in response to the Call for Papers for the Fifteenth International Conference on Grey Literature entitled "The Grey Audit"⁶, the idea to create a repository of good practices in grey literature was born and the project team was formed. The publisher of the monograph on grey literature was contacted in an effort to interest them in the project. We felt that an online repository would be a better investment in human resources than the publication of a second edition of the monograph. However, the publisher felt that this was not their core business to which we decided to independently construct a repository.

Project Goals

The initial goal of the project was to develop an open source repository of published good practices in the field of grey literature. During the course of the project a number of issues were raised requiring decisions that both expanded the project goals while at the same time further defining the importance that this resource could contribute to the field of grey literature. First of all, the term 'good practice' was opted instead of 'best practice'. The latter term has a connotation, which to potential contributors might set a barrier to the submission of a record. One could read in the term that there is only one best

^{*} First published in the GL15 Conference Proceedings, March 2014.

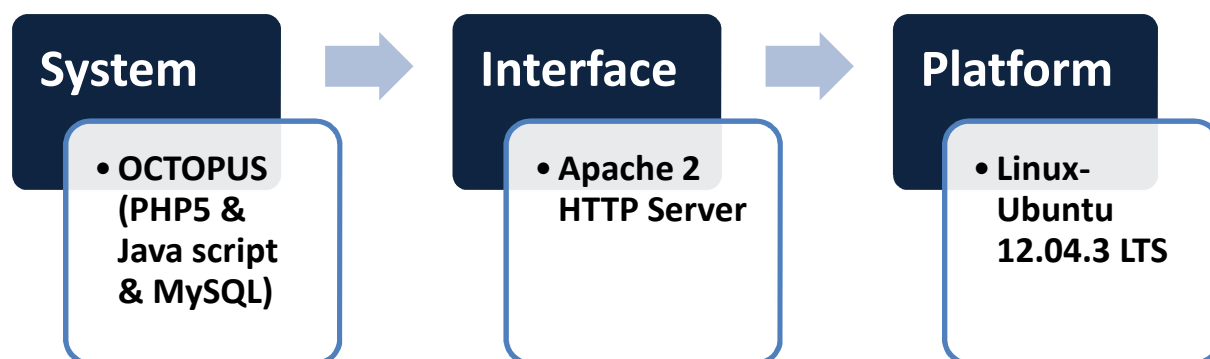
practice related to a particular aspect of grey literature. However, due to the scale and diversity of producing bodies, document types, and distribution channels such an interpretation would be limiting. Hence, the term 'good practice' was decided and came to be defined as "simply a process or a methodology that represents the most effective way of achieving a specific objective."⁷ The second issue considers that if proposed good practices were accepted alongside published good practices, then the GreyGuide repository would stand to gain more metadata records early on and the proposed good practices would later become published and openly accessible in the repository. And finally, if proposed good practices were openly accessible to wider audiences, then the GreyGuide would function both as an open forum as well as a repository. Potential benefits of this open forum would help to bring researchers and educators as well as other stakeholders in the grey literature community together irrespective of geographical borders.

Method of Approach

The first step was to search the internet for existing templates that could be further adapted and styled for use in the project. Our search produced two templates, which were suited for such purposes. The first template was produced by FAO⁸, Food and Agriculture Organization of the United Nations and the second by IEEE⁹, Institute of Electrical and Electronics Engineers. Further information was also compiled from the Wikipedia¹⁰. A template was then drafted and the project technician incorporated it in an online format. The initial test resulted in the division of the one template into two online templates corresponding to published and proposed record entries. The early test indicated that those submitting proposed good practices were confronted with too many record fields that did not apply to their proposal. This could be frustrating to the record creator and a reason not to complete the submission process. The two online templates were then further designed to appear in logical sections corresponding to information about the good practice, the intended users, and the creator/contributor of the good practice. In the case of published good practices – the path, format, and document file name belong to fields in the last section of the template. Each record field was then tagged according to type of response: standard, compulsory, non-compulsory, repeatable, and/or system generated.

Prior to the test phase of the GreyGuide, lead texts were added to each of the repositories webpages providing users with pertinent information on what they would find in that part of the GreyGuide. Embedded lists were also added in order to facilitate record entry. These included a list of grey literature document types borrowed in part from GreyNet's website¹¹, a list of keywords drawn-up from a number of sources extracted from published titles and indexes available in the conference series on grey literature¹² as well as from The Grey Journal¹³, etc. Also included was a list of author's names and affiliations extracted from the Who is in Grey Literature¹⁴. Two other short lists were further compiled and added: target sectors¹⁵ and target audiences¹⁶. And finally, help screens were then linked to corresponding record field names providing needed explanations and examples for those creating records.

Technical Notes



Some technical information about the system, interface, and platform are available in the diagram above.

Project Promotion and Community Involvement

During the very formation of the project committee and the formulation of project goals, it was understood that the grey literature community should be informed and involved as much as possible throughout the process. This could be accomplished through promotional activities carried out via

existing communication channels - the first of which was the submission of the abstract to the GL15 Call-for-Papers. Once the submission was formally accepted by the conference program committee, a competition was held in which GreyNet members and non-members were invited to submit a graphic logo that would brand the project and subsequent repository.



Guide to Good Practice in Grey Literature

After the project committee selected the current logo from among the three entries, this was then used in the design of a webpage on GreyNet's website bearing the title, GreyGuide Repository¹⁷. This allowed then for a clear point of reference that could be linked and cross-linked to other social media including GreyNet's Distribution List and Listserv¹⁸, the LinkedIn Discussion Group¹⁹, Twitter²⁰, etc.

With the above measures in place, a number of postings and news articles also appeared in GreyNet's serial publications: GreyNet Newsletter²¹, The Grey Journal²², GL15 Conference Program Book²³ as well as in other serial publications with interest in the GreyGuide *i.e.* D-Lib Magazine²⁴, Grey Literature Strategies²⁵, etc.

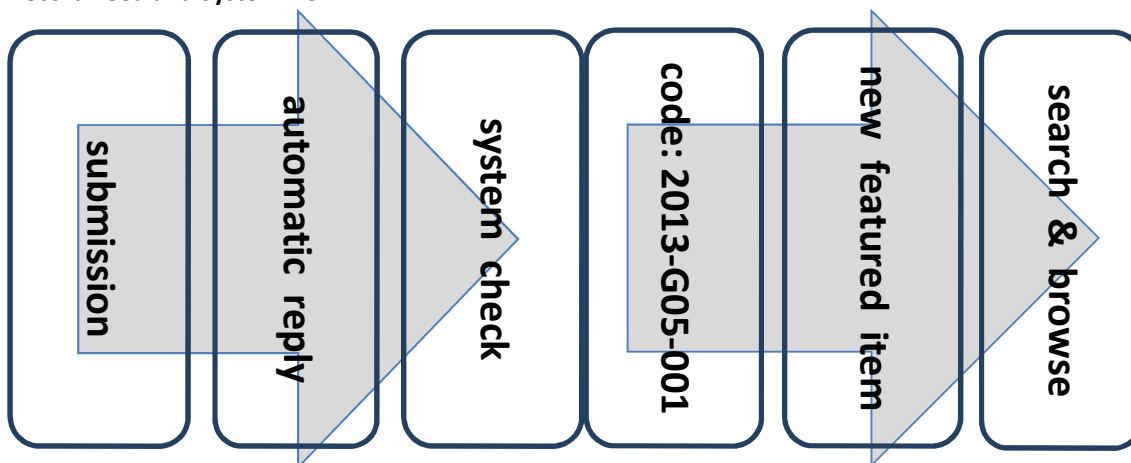
Project Meetings and Test Launch

During the months both prior to and after the test launch of the GreyGuide repository, periodic skype calls were made between the project partners. These communications fostered the work and were no less important than the three actual meetings which took place in the spring, summer, and fall of 2013. The first of such meetings was held in Bratislava (SR) on April 26, 2013 directly following the GL15 Program Committee meeting. After this meeting it was decided to divide the original template into two templates, one for published good practices and the other for proposed good practices. The second meeting was held in Pisa (IT) on July 1st thru 3rd 2013 and focused on the tagging of record fields, the formulation of lead texts, the construction of embedded lists, as well as help screens. There was haste in completing this work due to the scheduled test launch of the repository that would take place at the Library of Congress later that same month. The third and final meeting prior to the actual launch took place in Nancy (FR) on October 11, 2013 and dealt primarily with problems experienced in uploading documents either due to the non-compatibility of some internet browsers or managing character sets, where umlauts and other special characters produced distortions. This meeting was held in conjunction with another meeting on that same day aimed at the establishment of GreyNet's Resource Policy Committee to which the GreyGuide Repository would become integrally involved.



On July 25th 2013, the test launch of the GreyGuide Repository took place during a summer workshop on grey literature²⁶ held at the Library of Congress in which some 30 federal librarians attended. During the test launch, each participant had access to his/her own computer and were asked to enter either proposed or published good practices that they or their organizations would consider worthwhile for the grey literature community. To assure those participating in the test launch that their records would not be entered in the system should they so choose, they were instructed to simply indicate in the “Note field” - *Not for publication*. During the two hour session, dozens of test records were created and a list of comments and recommendations was drawn-up and sent to the project workers in Pisa. This feedback contributed to the fine-tuning of the GreyGuide repository and was reported back to those federal librarians on November 6, 2013 as part of a live webcast during FEDLINK’s annual Fall Exposition²⁷.

Record Feed and System Flow



On December 2nd 2013, during the official launch of the GreyGuide Repository²⁸ a demonstration of a record feed into the system and its flow through to completion is shown in the above illustration. In brief, once a record is completed online and submitted to the system the creator of the record receives an automatic reply. The system manager then checks the record and if all of the required fields are completed a unique code is assigned the record and the record then appears for a period of time in the New Feature Items Section. The record is likewise available for browsing, search and retrieval. Should there be a complication with a record; the system manager would notify the record creator before a system code is assigned.

The Way Forward

As with any repository, technical developments are ongoing. Likewise, the acquisition of records requires a proactive policy and relies on the awareness and willingness of the information community it serves to populate the repository. The GreyGuide project partners are intent on the acquisition of good practices in grey literature and will seek to coordinate efforts via GreyNet’s newly expanded infrastructure²⁹ involving three of its committees: the Resource Policy Committee geared to open access, the Community Management Committee focusing on social media, and the LIS Committee dealing with education and training of both students and faculty in the field of grey literature. While the acquisition of records is expected to be time-consuming and the initial harvest will not produce an abundance of records, the project is long term and the benefits worthwhile.

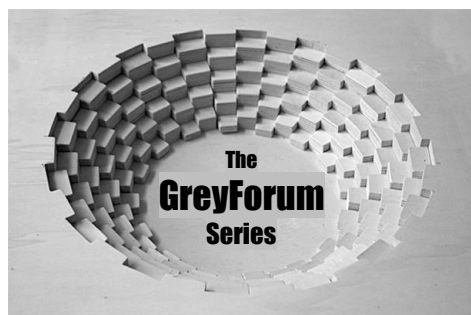
Once a significant number of records are deemed accessible in the GreyGuide, a content and data analysis will be carried out – the results of which should indicate worthwhile uses and applications of this online, open resource and forum for the grey literature community.

References

- ¹ De Castro, P. and S. Salinetti (2005), Uniform Requirements for grey literature: proposal for the adoption of 'Nancy style', <http://hdl.handle.net/10068/697810>
- ² <http://www.glisc.info/>
- ³ Grey literature in library and information studies (2010) edited by D.J. Farace and J. Schöpfel
<http://www.degruyter.com/view/product/41302?rskey=QPXwGs&result=5>
- ⁴ Rabina, D. (2010) Course and Learning Objective in the Teaching of Grey Literature: The Role of Library and Information Science Education. <http://www.degruyter.com/view/product/41302?rskey=QPXwGs&result=5>
- ⁵ <http://www.linkedin.com/groups/GreyNet-3718857>
- ⁶ <http://www.textrelease.com/gl15program.html>
- ⁷ Identifying and Sharing Good Practices, SDC Knowledge Management Toolkit, 2004
<http://www.fao.org/knowledge/goodpractices/gp-definitionsandcriteria/gp-definitions/en/>
- ⁸ <http://www.fao.org/knowledge/goodpractices/en/>
- ⁹ http://wiki.ieee-earth.org/Template:Submit_Practice
- ¹⁰ http://en.wikipedia.org/wiki/Best_practice
- ¹¹ <http://www.greynet.org/greysourceindex/documenttypes.html>
- ¹² <http://www.textrelease.com/publications/proceedings.html>
- ¹³ <http://greynet.org/thegreyjournal/previousissues.html>
- ¹⁴ <http://www.textrelease.com/whois2013.html>
- ¹⁵ Academic, Business, Government, Intergovernmental Organization, Non-Governmental Organization, Research Centre, and/or Other.
- ¹⁶ Instructor, Librarian, Publisher, Author, Researcher, and/or Other.
- ¹⁷ <http://www.greynet.org/greyguiderepository.html>
- ¹⁸ listserv@greynet.org
- ¹⁹ <http://www.linkedin.com/groups/GreyNet-3718857>
- ²⁰ @GL15conference
- ²¹ <http://www.textrelease.com/publications/newsletter.html>
- ²² <http://greynet.org/thegreyjournal.html>
- ²³ <http://www.textrelease.com/gl15program.html>
- ²⁴ <http://www.dlib.org/dlib/september13/09inbrief.html>
- ²⁵ <http://greyelitstrategies.info/news/greyguide-guide-good-practice-grey-literature-community-driven-open-resource-project>
- ²⁶ http://www.greynet.org/images/Grey_Boot_Camp.pdf
- ²⁷ http://www.loc.gov/flicc/Exposition/2013/Fall/agenda_renFall2013.pdf
- ²⁸ <http://greyguide.isti.cnr.it/>
- ²⁹ http://greynet.org/images/GreyNet_2014_Infrastructure_.pdf

"The GreyForum is a series of onsite and online courses, seminars, and workshops where grey literature provides common ground for information professionals in the process of knowledge transfer"

Grey Literature and Policy Development: The Pisa Declaration



This seminar is organized together with colleagues from Inist-CNRS (France), ISTI-CNR (Italy), OpenAIRE (EU), and GreyNet International. This initiative by GreyNet's Resource Policy Committee (RPC) envisions a meeting of the minds in brokering the future of grey resources.

Grey Literature and Policy Development: The Pisa Declaration



GreyForum 3.1

Seminar

Grey Literature and Policy Development: The Pisa Declaration

Date

Monday, 7 April 2014

Time

10:30 – 16:30 hours

Location

**CNR, National Research Council
Via Giuseppe Moruzzi 1
56124 Pisa, Italy**

Host and Organizers

**CNR, National Research Council;
Resource Policy Committee (RPC):
Inist-CNRS, ISTI-CNR, OpenAIRE,
GreyNet International**

Online Registration

The Program includes lunch, coffee service, and the farewell reception. Early registration is recommended based on the expected number of participants.

<http://webserv1.isti.cnr.it/GreyForum>

Contact

**GreyNet International
Grey Literature Network Service
Javastaat 194-HS, 1095 CP
Amsterdam, Netherlands**

info@greynet.org

<http://www.greynet.org>

Phone/Fax +31 (0) 20 331 2420

In October 2013, a meeting was convened in Nancy in which representatives from INIST-CNRS, ISTI-CNR, OpenAIRE, and GreyNet were present. The goal of that meeting was to establish a working committee to seek further collaboration among repositories housing grey literature resources, collections, and services. The outcome in Nancy was the establishment of GreyNet's Resource Policy Committee (RPC) chaired by Herbert Gruttemeier, Head of International Relations at Inist-CNRS. The committee's first activity was set to organize a seminar in the spring of 2014 hosted by CNR in Pisa that would focus on Grey Literature and Policy Development related to open access, open data, open standards, open science, etc. Former SIGLE members, current OpenGrey partners, as well as other stakeholders both within and outside the grey literature community are invited to participate.

Grey Literature and Policy Development is geared to publishers, librarians, archivists, and other information professionals in government, academics, business and industry who are involved in the production and/or management of grey literature resources.

About the Program

In the morning, invited speakers from organizations in Austria, France, Greece, Italy, Netherlands, Poland, and the United Kingdom will address issues on open access, open data, open standards, and open science as they impact grey literature. In the afternoon, participants will be invited to give briefings on their grey literature resources, collections, and services. The seminar will further seek to close with a declaration of intent supporting policy development on grey literature.

10:00 Registration, Coffee Service

10:30 Welcome Address

10:40 Invited Speakers

13:00 Lunch

14:00 Participant Showcase

15:20 Coffee Service

15:50 Draft Pisa Declaration

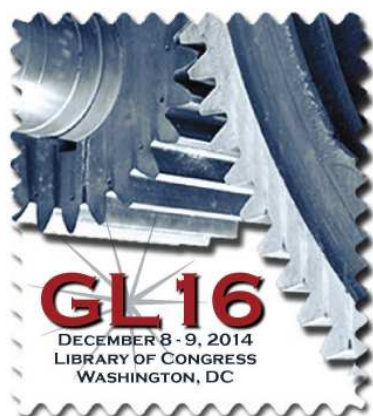
17:00 Farewell, Reception

Further details visit

<http://www.greynet.org/greyforumseries.html>



Sixteenth International Conference on Grey Literature



Grey Literature Lobby: Engines and Requesters for Change

The Library of Congress, Washington DC, USA

Federal Library Information Network, December 8-9, 2014

Call for Papers

- Think Tanks • Advocacy Groups • Research Teams • NGOs • IGOs • Foundations
- Coalitions • Lobbyists • Special Interest Groups • Task forces • Associations, Etc.

Guidelines for Abstracts

Title of Paper:	Topics/Themes:
Author Name(s):	Telephone:
Organization(s):	Fax:
Address/P.O. Box:	Email:
Postal Code - City - Country:	URL:

Participants who seek to present a paper at GL16 are invited to submit an English abstract between 350-400 words. The abstract should deal with the problem/goal, the research method/procedure, an indication of costs related to the project, as well as the anticipated results of the research. The abstract should likewise include the title of the proposed paper, theme(s) most suited to the paper, name(s) of the author(s), and full address information. Abstracts are the only tangible source that allows the Program Committee to guarantee the content and balance in the conference program. Every effort should be made to reflect the content of your work in the abstract submitted. Abstracts not in compliance with the guidelines will be returned to the author for revision.

GL16 Conference Themes

- | |
|--|
| ☐ Emerging and Changing Markets for Grey Literature |
| ☐ Mapping Grey Communities and New Stakeholders |
| ☐ Public Awareness of Grey Literature |
| ☐ Standards for Metadata and Grey Literature |
| ☐ Open Access to Research Data |
| ☐ Publishing and Licensing Grey Literature |

Due Date and Format for Submission

Abstracts in MS Word must be emailed to conference@textrelease.com by **April 11th 2014**. The author will receive verification upon its receipt. Shortly after the Program Committee meets on April 25th 2014, authors will be notified of their place on the conference program. This notice will be accompanied by further guidelines for submission of full text papers, accompanying research data, PowerPoint slides, and required Author Registration.

Stefania Biagioni graduated in Italian Language and Literature at the University of Pisa and specialized in data processing. She is currently a member of the research staff at the Istituto di Scienza e Tecnologie dell'Informazione "Alessandro Faedo" (ISTI), an institute of the Italian National Research Council (CNR) located in Pisa. She is head librarian and member of the ISTI Networked Multimedia Information Systems Laboratory (NMIS). She has been the responsible of ERCIM Technical Reference Digital Library (ETRD) and currently of the PUMA (Publication Management) & MetaPub, a service oriented and user focused infrastructure for institutional and thematic Open Access repositories looking at the DRIVER vision, <http://puma.isti.cnr.it>. She has coauthored a number of publications dealing with digital libraries. Her activities include integration of grey literature into library collections and web access to the library's digital resources, including e- journals and databases. GreyNet member since '05. stefania.biagioni@isti.cnr.it

Lubomir Bilsky started his professional career in 2001 at the Business and Innovation Centre Bratislava, where he was responsible for international projects implementation. He was an active member of the Innovation Relay Centres (IRC) Network dealing with the support of transnational research and technological co-operation development. In 2008, he became the head of Innovation section within the Enterprise Europe Network Slovakia consortium, an EC initiative supporting business, innovation and research co-operation of research organisations and SMEs. At CVTI SR, he has been responsible for preparation and implementation of several national and international projects focused on support of scientific community in Slovakia, including active promotion of science and technology in society. He also co-ordinates activities related to building the national infrastructure for technology transfer support in Slovakia. Email: lubomir.bilsky@cvtisr.sk

Kiyoshi Ikeda works as librarian at the Central Library of Japan Atomic Energy Agency (JAEA). He also currently works as the chief of International Nuclear Information System (INIS) and Nuclear Information Section of JAEA. Since 2011, he is in charge of selecting and classifying for INIS database input data. He joined JAERI (former JAEA) in 2004, and had been working for acquisition of library materials (domestic/foreign books, journals and technical reports). Between 2007 and 2010, he had been working for editing work at "JAEA Reports" and "JAEA R&D Review" which are grey literatures. He holds a degree in library and information science (M.A.) from the Graduate School of University of Library and Information Science. ikeda.kiyoshi@jaea.go.jp

Xanthoula Kostaras is the manager of the Guideline Utilization Resource Unit (GURU), a knowledge management program within CancerControl Alberta, Canada. She received an MSc in Community Health Sciences from the University of Calgary in 2008, with a specialization in epidemiology. Her research interests relate to strategies to improve guideline implementation and adherence, as well as the use of knowledge transfer strategies to support cancer patients to receive care that is based on best evidence and best practices. Email: bxanthoula.kostaras@albertahealthservices.ca

Miroslav Kubiš works in Slovak Centre of Scientific and Technical Information since 2012 as a Head of Department of Technology transfer and project manager of national project: The national infrastructure for technology transfer support (NITT SK). miroslav.kubis@cvtisr.sk

Emily MacLeod is one of the Tumour Group Facilitators for the Guideline Utilization Resource Unit (GURU). Her background of health sciences support her role as a registered nurse focused on clinical practice guideline implementation. Emily collaborates with knowledge management specialists and members of provincial tumour teams to create communication strategies, support knowledge transfer and facilitate uptake of evidence based oncology guidelines. Emily.MacLeod@albertahealthservices.ca

Elysa Meek is one of the Tumour Group Facilitators for the Guideline Utilization Resource Unit (GURU). She is a bachelor-prepared registered nurse who works with the provincial tumour teams and focuses her efforts on strategies to support guideline implementation and evaluation. She is passionate about creating a solid implementation infrastructure regarding communication and team collaboration and concentrates her efforts on building the supports needed to facilitate the knowledge transfer of our evidence-informed guidelines into practice. E-mail: Elysa.Meek@albertahealthservices.ca

Leonid P. Pavlov graduated from Moscow Physical-Engineering Institute, Dipl. Eng. in computer systems. He is a Candidate of Sciences in informatics; and since 1976 is employed with the Scientific and Technical Information Centre of Russia (VNTIC) as Deputy Director. Main works in information systems, scientific and technical information, and grey literature. Email: leonpav@mail.ru

Hélène Prost is responsible for studies at the Institute of S&T Information (INIST-CNRS). The different studies concern the evaluation of collections, document delivery, usage analysis, grey literature and open access to information. Expertise in statistical tools and knowledge in library information science allowed her to participate in various research projects and writing of several publications. Email: helene.prost@inist.fr

Inderjeet Sahota is a Knowledge Management Specialist for the Guideline Utilization Resource Unit (GURU) at Alberta Health Services – Cancer Control. He received his B.Sc. in Kinesiology (2008) and M.Sc. in Biomedical Physiology and Kinesiology (2011) at Simon Fraser University. As part of GURU he supports Provincial Tumour Teams in articulating their best practices related to the diagnosis, staging, treatment and follow-up of cancer. His current work is focused on the development of evidence-informed clinical practice guidelines for site-specific cancers. E-mail: Inderjeet.sahota@albertahealthservices.ca

Joachim Schöpfel is senior lecturer at the Dept of Information and Library Sciences at the Charles de Gaulle University of Lille 3 and Researcher at the GERiCO laboratory. He is interested in scientific information, academic publishing, open access, GL and eScience. He is a member of GreyNet and euroCRIS. He is also the Director of the National Digitization Centre for PhD Theses (ANRT) in Lille, France. joachim.schopfel@univ-lille3.fr

Melissa Shea-Budgell is a specialist with the Guideline Utilization Resource Unit (GURU). Melissa supports the Genitourinary, Endocrine, Cutaneous, and Gynecologic Provincial Tumour Teams in the development and evaluation of clinical practice guidelines. Melissa holds a Master of Science degree in Nutrition and Health Promotion and has been working in the area of health sciences research since 2002. Melissa is interested in research on the development and use of evidence-based quality indicators in cancer care and the delivery of cancer-related information to patients undergoing follow-up for a malignancy. Email: melissa.shea-budgell@albertahealthservices.ca

Brae Surgeoner is a Knowledge Management Specialist for the Guideline Utilization Resource Unit (GURU) at Alberta Health Services – Cancer Control. She received her MSc in Food Safety and Risk Communication from the University of Guelph in 2006. As part of GURU she supports Provincial Tumour Teams in articulating their best practices related to the diagnosis, staging, treatment and follow-up of cancer. Her current work is focused on the development of evidence-informed clinical practice guidelines for site-specific cancers. Email: brae.surgeon@albertahealthservices.ca

Marcus Vaska is a librarian with the Knowledge Resource Service (KRS), University of Calgary, Holy Cross Site, providing research and information support at an Alberta Cancer Care research facility. A firm supporter of embedded librarianship, Marcus engages himself in numerous activities, including instruction and research consultation, with research teams at Holy Cross and beyond. Marcus' current interests focus on collaborative educational techniques aimed at creating greater awareness and bringing grey literature to the forefront in the medical community. Email: mmvaska@ucalgary.ca

Laurissa Watson is currently a Research Assistant in Evaluation in Population and Public Health at Alberta Health Services. She graduated from the University of Calgary with a Bachelor's in Health Sciences (Honours) and recently completed an MPH from the University of Saskatchewan. Recent projects include research on HPV vaccine uptake in Alberta, an evaluation of a breast and cervical cancer screening social marketing campaign, and an evaluation of workplace health programs in Alberta. E-mail: Laurissa.Watson@albertahealthservices.ca

Notes for Contributors

Non-Exclusive Rights Agreement

- I/We (the Author/s) hereby provide TextRelease (the Publisher) non-exclusive rights in print, digital, and electronic formats of the manuscript. In so doing,
- I/We allow TextRelease to act on my/our behalf to publish and distribute said work in whole or part provided all republications bear notice of its initial publication.
- I/We hereby state that this manuscript, including any tables, diagrams, or photographs does not infringe existing copyright agreements; and, thus indemnifies TextRelease against any such breach.
- I/We confer these rights without monetary compensation and with the understanding that TextRelease acts on behalf of the author/s.

Submission Requirements

Manuscripts should not exceed 15 double-spaced typed pages. The size of the page can be either A-4 or 8½x11 inches. Allow 4cm or 1½ inch from the top of each page. Provide the title, author(s) and affiliation(s) followed by your abstract, suggested keywords, and a brief biographical note.

A printout or PDF of the full text of your manuscript should be forwarded to the office of TextRelease. A corresponding MS Word file should either accompany the printed copy or be sent as an attachment by email. Both text and graphics are required in black and white.

REFERENCE GUIDELINES

General

- i. All manuscripts should contain references
- ii. Standardization should be maintained among the references provided
- iii. The more complete and accurate a reference, the more guarantee of an article's content and subsequent review.

Specific

- iv. Endnotes are preferred and should be numbered
- v. Hyperlinks need the accompanying name of resource and date; a simple URL is not acceptable
- vi. If the citation is to a corporate author, the acronym takes precedence
- vii. If the document type is known, it should be stated at the close of a citation.
- viii. If a citation is revised and refers to an edited and/or abridged work, the original source should also be mentioned.

Examples

Youngen, G.W. (1998), Citation patterns to traditional and electronic preprints in the published literature. - In: College & Research Libraries, 59 (5) Sep 1998, pp. 448-456. - ISSN 0010-0870

Crowe, J., G. Hodge, and D. Redmond (2010), Grey Literature Repositories: Tools for NGOs involved in public health activities in developing countries. – In: Grey Literature in Library and Information Studies, Chapter 13, pp. 199-214. – ISBN 978-3-598-11793-0

DCMI, Dublin Core Metadata Initiative Home Page http://purl.oclc.org/metadata/dublin_core/

Review Process

The Journal Editor first reviews each manuscript submitted. If the content is suited for publication and the submission requirements and guidelines complete, then the manuscript is sent to one or more Associate Editors for further review and comment. If the manuscript was previously published and there is no copyright infringement, then the Journal Editor could direct the manuscript straight away to the Technical Editor.

Journal Publication and Article Deposit

Once the journal article has completed the review process, it is scheduled for publication in The Grey Journal. If the Author indicated on the signed Rights Agreement that a preprint of the article be made available in GreyNet's Archive, then browsing and document delivery are immediately provided. Otherwise, this functionality is only available after the article's formal publication in the journal.

An International Journal on Grey Literature

'SUSTAINING GOOD PRACTICES IN GREY LITERATURE'

SPRING 2014 – TGJ VOLUME 10, NUMBER 1

Contribution to the improvement of dissemination of grey literature – JAEA Library's efforts for collecting, organizing and disseminating information on nuclear accidents	7
<i>Kiyoshi Ikeda, Takeshi Ohshima, Mayuki Gonda, Shun Nagaya, Misa Hayakawa, Yukinobu Mineo, Minoru Yonezawa, and Keizo Itabashi (Japan)</i>	
Guiding the Grey: The Implementation and Evaluation of a Journal Club amongst a Librarian and Clinical Practice Guideline Developers – A Cancer Care Case Study	15
<i>Marcus Vaska, Xanthoula Kostaras, Elysa Meek, Emily MacLeod, Inderjeet Sahota, Melissa Shea-Budgell, Brae Surgeoner, and Laurissa Watson (Canada)</i>	
Technology Transfer Support on National Level	25
<i>Ľubomír Bilský, Adriana Shearman, and Miroslav Kubiš (Slovak Republic)</i>	
Federal GL System Input Flow Analysis	33
<i>Aleksandr V. Starovoitov, Yuri M. Bogdanov, Aleksandr M. Bastrykin, Anton I. Borzykh and Leonid P. Pavlov (Russia)</i>	
Grey Communities: A Scientometric Approach to Grey Literature, In and Outside of GreyNet	38
<i>Hélène Prost and Joachim Schöpfel (France)</i>	
GreyGuide - Guide to Good Practice in Grey Literature: A Community Driven Open Resource Project	51
<i>Stefania Biagioni and Carlo Carlesi (Italy), Joachim Schöpfel (France), Dominic Farace and Jerry Frantzen (The Netherlands)</i>	

Colophon	2
Editor's Note	5
On the News Front	
GreyForum Workshop 3.1	
Grey Literature and Policy Development: The Pisa Declaration	56
GL16 Call for Papers	
'Grey Literature Lobby: Engines and Requesters for Change'	57
Advertisements	
NTK, National Technical Library, Prague, Czech Republic	4
IAEA, Department of Nuclear Energy	6
NYAM, New York Academy of Medicine, USA	14
CVTI SR, Slovak Centre of Scientific and Technical Information, Slovak Republic	24
The Grey Journal's Tenth Anniversary Special Offer	50
About the Authors	58
Notes for Contributors	59