

GREY LITERATURE 2.0

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Abstract

This paper tries to describe grey literature in the context of web 2.0 tools and platforms. We can observe increasing trends in online informal communication on scholar/scientific, government and commercial levels, e.g. microblogging, blogging or academic social networks, which also build their position in the distribution cycle of grey literature. Apart from examples of grey literature 2.0, the paper also discusses problems of promoting grey literature and grey literature community through social media.

Keywords

Academic social networks, grey literature 2.0, microblogging, scholarly communication, scientific blogging.

1. Introduction

In every minute, there are about 700 000 pieces of content shared on *Facebook*¹, 100,000 tweets sent on *Twitter*² and 48 hours of video uploaded to *YouTube*³. [Pring, 2012]. These sites are generally used for personal or business communication, but we can use them also for another purposes. We can enrich scholarly communication using tools such as academic social network, scientific blog or microblog and boost the information exchange. In this paper, I will try to discuss the benefits and possibilities of usage of web 2.0 tools and services for grey literature.

Although the grey literature is mainly a library and information science term, we cannot exclude this group of documents from broader framework of scientific communication. Typical examples of the grey literature are theses, preprints, annual or research reports, standards and norms and trade literature. The biggest problem of grey literature can be

¹ <http://www.facebook.com>

² <http://www.twitter.com>

³ <http://www.youtube.com>

actually found in its definition, which says that "*the grey literature is nonpublished literature 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.*" [Luxembourg, 2004]. So, in contrast with traditional published literature, in the field of grey literature there are more problems with collecting, archiving, dissemination and visibility. For this reason, it is crucial to find new approaches to distribution of these documents into the readers community.

If we consider that almost all of grey literature is created only in electronic version, we also have to pay attention to changes in the electronic communication as such. In the beginning of the 21st century, Tim O'Reilly came with new term „web 2.0“, which describes tools and services of newly arising web generation. There are three main characteristics of this platform. First is the possibility of sharing, which is a necessity rather than personal choice in the context of social media nowadays. Secondly, web content is not a matter of only one person or limited group of people, but it is user generated and can be modified along the way. And last characteristic, closely connected to the previous ones, is collaborative approach. These basic features are part of each web 2.0 tool or service like wiki, blogs, RSS, mash-ups, social networks etc.

The changes in the communication have also influenced the field of grey literature. A new term „grey literature 2.0“ emerges, if we combine grey literature and web 2.0. In this paper, we can recognize three points of view on the topic. First is aimed towards the grey literature arising in the web 2.0 environment. Second one is aimed to the web 2.0 tools and services, which increase visibility and dissemination of existing grey literature. And last point of view solves problematics of usage of the web 2.0 tools for communication within the grey literature community.

2. Grey literature arising in the environment of web 2.0

We don't need to look far to find some examples of the grey literature 2.0. One of them are generally used blogs (also weblogs), websites consisting of particular entries (so called posts). For understanding why we should be interested in blogs as the grey literature, it is important that nowadays we can find not only personal blogs, but also corporate and scientific blogs or blogs of state administration. And these information resources could be equally important for grey literature community as bulletins, house journals, reports etc. Blogs allow authors to disseminate newly discovered information (e.g. only part of their research) and also offer scope for subjective thoughts and comments. It's a quick way of communication of information, allowing others to respond and comment particular problems. Moreover, the audience isn't known in advance, so the information can find own readers through search engines and in contrast with information shared on social networks, blog posts are more permanent (of course with some exceptions). And last but not least, significant benefit is - especially for scientists - that blogs can work well as the place for dealing with new or not yet fully mature thoughts or concepts, which may lead to significant insights related to their

research. But on the other hand, there are also disadvantages and problems, which must be solved. For the stakeholders, who are responsible for collecting and archiving the content, the main problem is how to find, index and harvest these resources. The reason why authors don't use blogs so much and frequent obstacle is a lack of time for writing the posts and also the fear from misunderstanding of their research, if they publish only part of it and the fear of data or idea theft etc.

More specific and maybe better example of the grey literature 2.0 is „Open Notebook Science“, the tool of the broader concept called Open Science. Open Notebook Science is more a practice than a type of document, and includes sharing of the primary research data like protocols, lab notes, negative results, analyzed or raw data, experiment description etc. For opening the science we can simply use blogs. One of the best examples of this approach is the online open laboratory notebook of the Open Research advocate Cameron Neylon *Cameron's LaBLog*⁴. But there exist also whole platforms and websites supporting Open Notebook Science – e.g. *Open Notebook Science Challenge*⁵, wiki which allows users to upload reports from experiments and make them publicly available online. Another examples, which partly support Open Notebook Science, are *OpenWetWare*⁶ and *Protocol Pedia*⁷. As in the case of blogs, there exist fears of data thefts or concerns about „being scooped“. Authors are often motivated by publishing and patenting and the opening of the research findings can make problems in publishing process. But there are also benefits and advantages like improvement of the scientific communication, better understanding to the results, reduction of time and financial costs, and creating of new type or form of collaboration.

3. Web 2.0 tools/services for archiving, dissemination and increasing visibility of GL

The greatest benefits of web 2.0 tools and services for science are that they can help with building online community, increase the scientists visibility and facilitate the communication with public and new (unknown) experts. From GL point of view, web 2.0 tools and services are suitable mainly for dissemination of information in real-time and increasing the visibility of shared documents within an audience unknown in advance. In terms of archiving, we could replace a repository with generally used services, but only in short-term horizon. These services or tools are e.g. *Scribd*⁸ or *SlideShare*⁹ for text documents and presentations, *Youtube* or *Vimeo*¹⁰ for videos and *Dropbox*¹¹ or *Sugarsync*¹² for archiving any files/documents with

⁴ http://biolab.isis.rl.ac.uk/camerons_labblog

⁵ <http://onschallenge.wikispaces.com/>

⁶ http://openwetware.org/wiki/Main_Page

⁷ <http://www.protocolpedia.com/index.php>

⁸ <http://www.scribd.com/>

⁹ <http://slideshare.net/>

¹⁰ <http://www.vimeo.com>

possibility of synchronizing the content on more than one device. Accessibility, possibility of sharing, embedding on blogs/websites and synchronizing of content and free use are main benefits of these tools. But on the other hand, untrustworthiness of any information, only short-term preservation and diversity of content are main disadvantages.

Maybe more important for GL community is usage of web 2.0 tools/services for dissemination and increasing visibility of grey literature and connection between repositories and (academic) social networks for this purpose. Nowadays, there exist many academic social networks, general sites like *Mendeley*¹³, *ResearchGate*¹⁴, *Academia.edu*¹⁵ or subject-oriented sites like *Nature Network*¹⁶, *Malaria World*¹⁷ or *Sermo*¹⁸ etc. Besides these, commonly known services like Twitter and LinkedIn are also often used for sharing of (GL) documents or information about them, as we will see later.

Academic social networks are based on similar principles as other social networks. ASNs allow users to create profiles, create and join blogs, groups, discussions etc. Some of them also support uploading and sharing of documents and managing list of publications on researchers profile and connecting the profile through unique identifier (e.g. ORCID) with other pages. An example of successful academic social network is *Mendeley*, platform, which offers not only web-based interface working like social network and search engine, but also desktop application for managing and sharing own document library, synchronizing the content and other functions and small applications for researchers. Web interface offers online data backup storage up to 1 GB for registered users and shows detailed statistics (downloads, readers statistics etc.). Everyone, not only registered users, can use search engine (Papers), which allows to search in more than 334 mil. research papers across Mendeley content and other open repositories.

Apart from academic social networks we can also use microblogs/microblogging for spreading information on grey literature among the public. Microblogging could be defined as „*a form of online communication by which users publish and broadcast content to the public or to a limited group of contacts. While blogging allows the publication of lengthy, multi-media, user-generated content, microblogging is limited to very brief, text-only messages.*“ [Pepe, 2011]. One of the famous microblogging platforms, which is also used by scientists and other producers of grey literature, is the previously mentioned *Twitter*. Twitter has over

¹¹ <http://www.dropbox.com/>

¹² <http://sugarsync.com/>

¹³ <http://www.mendeley.com>

¹⁴ <http://www.researchgate.net>

¹⁵ <http://www.academia.edu>

¹⁶ <http://network.nature.com/>

¹⁷ <http://www.malariaworld.org/>

¹⁸ <http://www.sermo.com/>

200 mil. users and allows them to share short text messages (so called tweets) limited to 140 characters with undefined audience. The basic idea of this platform is openness, so if the user doesn't set up his account as restricted, his tweets are available to everyone. They can be also retweeted (reposted) and other users can reply to them. Twitter is known as fast information channel, which is used across diverse fields, also among scientific community. Moreover, tweets could be considered as user recommendations or citations and as such amend the process of information dissemination. But the problem with using Twitter or another similar microblogging websites/social networks for capturing information about grey literature is their generality. Twitter is not aimed only to scientific, business or governmental communication and the problem is, how to filter relevant tweets? There are two possible ways of obtaining tweets with information about grey literature - people-based approach and hashtags-based approach [Weller, 2011]. First approach is based on manual identification of Twitter profiles to follow. This approach doesn't solve the problem with recognizing relevant users and finding new information resources (idea leaders or influencers) among them. The hashtags-based approach uses hashtags, *words or phrases prefixed with the symbol #* [Hashtag, 2008], as selection criteria, but doesn't allow for general names, misspelling or variability of hashtags (e.g. #gl, #greyliterature or #grayliterature). In addition to monitoring of random user-generated hashtags, there exist also official hashtags for conferences and events (#nusl2012 or #OR2012 etc.), which could be followed.

Apart from the problem with findability of grey literature on social networks, there is unanswered question related to the content created through social networks (tweets, posts etc.). The question is, if this content is grey literature as such and if so, how to archive this new type of grey documents/data? Leslie Carr and Adam Field have presented paper on this topic at the Open Repositories 2012 conference (#OR2012), in which they have introduced *Tweeepository*, EPrint repository adapted for harvesting and archiving tweets from Twitter [Carr, 2012]. And when I mentioned repositories, there are also other ways how to connect or use repositories and social networks together. One of them is social bar, which is a group of links to various social networks, helping users with easy and fast sharing of the information about record on their personal profile on specific social network directly from the repository.

4. Communication and promotion of Grey literature community on the web 2.0

Last part of the paper will present third point of view on grey literature 2.0, that is using web 2.0 tools and services for communication and promotion of grey literature and grey literature community. Although the primary function of social networks is not marketing but connecting people and strengthen social relations, commercial companies, NGO and other institutions find them good for promotion and communication with their customers. As we know, GL community is not large and almost all of its members know each other. And in general, grey literature organizations and stakeholders unfortunately do not use much coordinated web 2.0 tools and services for promotion and communication.

Since March 2012, the National Repository of Grey Literature (NRGL) runs its own Facebook page¹⁹ and started with social and (sometimes) more informal communication of information, which are also posted to the project's website and are sent via email conference to the NRGL partnership network. NRGL's Facebook page is mainly focused on communication with users, not only partners and producers of grey information. Project makes use of Facebook milestones to show development in years, and contains also a connect page with RSS feed of the project website, Youtube channel, and for future there is planned integration of the NRGL search interface into Facebook page or creating of some simple searching application.

International grey literature organization GreyNet has decided to use the professional social network LinkedIn²⁰ for promotion and communication. News, calls for contribution, information about current projects and professional questions are publicly shared among grey literature experts on the organization's profile. But as a GreyNet member, we can see that sharing information inside the GL experts group still takes place mainly via email conference, well within web 1.0, and the LinkedIn profile is very little used.

5. Conclusion

As we could see, grey literature 2.0 brings many advantages and challenges for grey literature community and with them also unsolved problems and obstacles, which stand before stakeholders and which have to be solved. The most important ones are how to collect and archive grey literature 2.0 and how to distinguish the quality information from content without potential benefit for scholarly communication.

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¹⁹ <https://www.facebook.com/nysl.cz>

²⁰ <http://www.linkedin.com/groups/GreyNet-3718857>

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