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Grey literature: a growing need for good practice

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Abstract Before the internet, grey literature addressed specific audiences and had limited circulation; it was produced mainly in-house with varying editorial standards. Today grey literature is increasingly available online and new responsibilities arise for its authors and issuing organizations. The challenges of a wider dissemination of grey literature are outlined; in particular, grey literature authors and issuing organizations should become aware of basic editorial standards and guidelines, including both technical and ethical issues.

Keywords Grey literature, guidelines, standards, scientific writing, technical reports.

Research scientists do not always adhere strictly to a journal's instructions to authors. When it comes to informal documents, such as those falling under the umbrella term of grey literature, scientists are even less inclined to follow editorial standards and guidelines. The broad category of grey literature includes technical reports, reports to funding agencies, teaching material, operational protocols, guidelines for laboratory techniques, translations and or information leaflets addressed to specific targets or produced for very practical aims.¹

Before the advent of the internet, grey literature had a limited circulation. It was produced mainly in-house, for practical rather than prestige purposes, and often had a rather shabby look—defined as “grey” to differentiate it from white or open publications appearing in commercial journals and books. It was therefore the Cinderella of literature.²

During the 6th International Conference on Grey Literature held in New York in 2004,³ the following definition for grey literature was adopted:

“information produced on all levels of government, academia, business and industry in electronic and print formats not controlled by commercial publishing, ie where publishing is not the primary activity.”

The limited circulation is no longer applicable because grey literature can now be freely and widely available via the Internet.

The most recent international conference on grey literature, held in Rome in November 2012, focused on tracking innovation. Disseminating research results in all forms is now widely recognised as best practice by many national and international institutions, not only for research but also for society. For example, the European Commission supports and encourages sharing all types of information and data, including grey literature.⁵ This implies a paradigm shift in information dissemination that goes beyond classical scholarly publications and confers a different status on grey literature as an accepted and important source of information circulated online.

Our recent search (May 2013) using PubMed, the most important information source for biomedicine, showed a massive increase in the number of times the term “grey literature” occurred in titles and abstracts of articles indexed in the database in the last 20 years, whereas from its first occurrence in 1976 until 2002, the number was very low and practically constant (Figure 1).

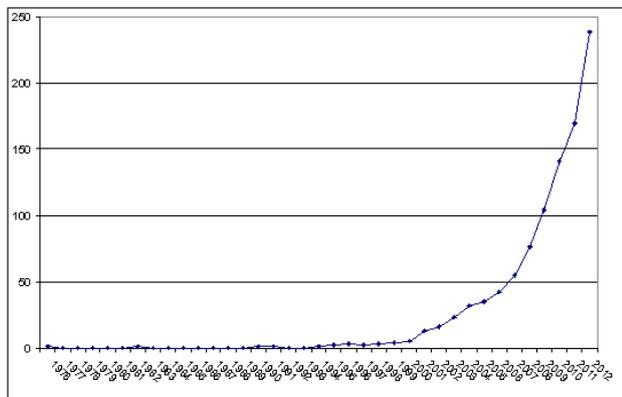


Figure 1. Occurrences of the term “grey literature” in titles or abstracts of articles indexed in PubMed (1976–2012)

We also searched the Cochrane Library, a collection of high-quality documents on healthcare research, including 7092 items as a whole in May 2013. The search retrieved 141 items tagged with the term “grey literature” in abstracts or titles from 1999 to 2012, with an increasing trend similar to that in PubMed. These data show that grey literature is now regarded as an important source of information in scholarly communication: it appears in meta-analyses of randomised controlled trials, especially when negative results are reported,^{6–8} and is cited more often owing to its online availability.

New responsibilities for authors and producers

The increasing acceptance of grey literature means that the responsibilities and challenges that confront the authors of grey literature and the organizations that publish it have changed⁹ and that grey literature is now expected to meet at least some basic editorial and production standards—this Cinderella needs to be properly attired to attend the ball! In most cases, the document design of grey literature is no longer so drab as to deserve the epithet.

An important change is that whereas grey literature in print was distributed to a specific audience, for example, only to technical or medical staff, on the internet it may be read by anyone, so that a different editorial approach is required.¹⁰

In this evolving scenario, ISO 5966 Presentation of scientific and technical reports¹¹ – which was very useful in the last century – no longer met the requirements of information technology and was withdrawn in 2000, although the basic philosophy that governed the structure of such reports and their parts continues to be valid.

It is important to ensure that a document has all its essential elements (authors, title, publication year, issuing organization) in place, shows a well-defined structure (title, abstract, sections, etc) and carries the associated metadata to make it easily readable online and retrievable by search engines.

The quality of open or white literature has always been associated with both content and presentation: content is subjected to the peer review process (which is now also under discussion for grey literature) and presentation follows specific and widely shared conventions. For example, most journal articles adopt the IMRaD structure (Introduction, Materials and methods, Results and Discussion) and a defined reference style, such as Vancouver.¹²

Recognizing the value of the Vancouver style for authors and editors of journal articles and the lack of freely available and updated guidelines for production of technical reports, we have pressed for similar recommendations for the production and dissemination of grey literature intended as a reference tool.² The Istituto Superiore di Sanità, Rome, Italy, presented a proposal to develop guidelines for producers of grey literature to the 7th International Conference on Grey Literature held in Nancy, France, in December 2005—hence the informal name “Nancy style”.

A small group of grey-literature producers, editors, librarians and information professionals agreed to collaborate in revising the document put forward by the Istituto Superiore di Sanità. Later, this “Nancy Group” became formally known as GLISC, the Grey Literature International Steering Committee.

“Nancy style”: guidelines for grey literature production

The Guidelines for the production of scientific and technical reports: how to write and distribute grey literature¹³ were created primarily to help grey-literature authors to write and distribute accurate, clear, easily accessible reports in different fields. The goal is to enable basic editorial and ethical principles to be applied in independent production of reports without formal editorial assistance.

The Guidelines are adapted from the well-known ICMJE “Uniform requirements”, now adopted by more than 1200 biomedical journals,¹² and also take into consideration the basic principles laid down in ISO 5966.¹¹

The Guidelines include ethical considerations, publishing and editorial issues, and advice on how to prepare and revise a report.

Ethical considerations are mainly based on the Vancouver style in the matter of who should be named as authors and contributors (definitions and responsibilities of authors and contributors), peer review, conflicts of interest, privacy and confidentiality. These considerations also apply to issuing organizations that act as editors of technical reports and are responsible for their quality and distribution. Organizations issuing grey literature should guarantee that the documents they produce are reliable and readable and, above all, comply with the aims and mission of the organization. These organizations should establish and maintain an editorial policy for grey literature that ensures internal coherence with their mission and respect for basic editorial principles, perhaps with the support of an internal editorial advisory board or service. Most academic and scientific institutions produce both grey literature and open literature, so it should not be difficult for them to take advantage of the editorial expertise available under the same roof.

Correct structure: the magic wand

A good structure promotes readability and usability and helps readers to retain information; furthermore, a well-organized document can be easily converted into XML to allow advanced search facilities for specific parts of the document, such as the introduction, conclusions and citations.

Editorially speaking, many strategies or conventions exist that are designed to add value to a document rich in content. In most cases, it is helpful to organize a report into sections and subsections (signalled either with numbers or with typographic style).

For these reasons, the Guidelines take into account, in particular, the technical aspects of both preparing and reviewing reports.

The core of the Guidelines is represented by the recommendations on document structure and its component parts. A synthesis of the Guidelines is included in the new edition of the *Science Editors' Handbook*.¹⁴

Availability and use of Guidelines

The Guidelines may be freely reproduced for educational, not-for-profit purposes. The GLISC website (www.glisc.info) offers the Guidelines in English as well as in French, German, Italian and Spanish. The Guidelines are also available on the EQUATOR Network website, the resource centre for good reporting of health research studies (<http://www.equator-network.org/resource-centre/library-of-health-research-reporting/reporting-guidelines/>).

Future challenges for grey literature

The main challenges for grey literature today are associated with online dissemination, copyright and training.

Open access

Free access via the internet, while adding value to the contents included in such documents, requires major efforts to ensure editorial quality (of both the structure and the content). Grey literature may, for example, deal with security issues or contain sensitive data that might be misused, which is why special care must be taken to make authors aware of the potential risks of spreading hazardous information.¹⁰ Careful editorial revision of the text or other review or peer review procedures is essential before circulating such data.

Grey-literature producers should develop and implement appropriate policies on archiving, error correction, version control, permanent access and preservation.

More efforts are now being made to include grey literature in repositories and new strategies are being considered for involving authors and issuing organizations and encouraging them to regularly deposit grey literature as soon as it is available, since no embargo period is supposed to be required for this kind of material. Deposition of grey literature in repositories would also ensure its permanent storage and thus solve the problem of its retrievability.

A welcome initiative is that of Europe PubMedCentral (<http://europepmc.org/>), which offers free access to biomedical literature resources. It is interested in exploring ways of collecting grey literature and providing access to

biological patents, clinical guidelines, doctoral theses and research reports, besides journal literature.

Many documents placed on websites become inaccessible shortly after publication, which is why grey-literature producers are encouraged to use stable or permanent sites for publishing their work. In any case, the publishers, when required, should amend a report, incorporate retractions, or make any other identifiable corrections instead of removing the report from the website. Preservation of electronic reports is essential for the historical record. Moreover, when a report is included in an institutional repository, information on the status of the document should be added (whether the document has been merely submitted or validated or revised, etc).

Copyright

Issuing organizations should make their position on copyright clear to authors and to others who are interested in using the editorial content of the documents.

Copyright laws differ among countries but copyright to an institutional report usually belongs to the issuing organization. This must be clearly identified in the report with the symbol ©, followed by the name of the issuing organization and the year of publication. A non-exclusive rights agreement offers an alternative to copyright, as this allows authors to use other means of publication and distribution for their work and provides a guarantee to the publishing body that the content is not in breach of any earlier copyright.

In the last ten years, one more way to manage copyright issues has become available and recommended, namely the use of Creative Commons (CC) licences. Such a licence is not an alternative to copyright, but enables copyright terms to be modified to match different needs regarding content use, re-use and sharing. Creative Commons is a non-profit organization providing free and easy-to-use copyright licences to share and use creative works, including grey literature, in a simple and standardized way.

Training

One effective strategy for improving the quality of grey literature is to empower authors, through specific training in editorial principles, to become qualified producers of documents. An example of empowering authors in grey literature production is provided by the NECOBELAC project (www.necobelac.eu). The project, funded by the European Commission within the 7th Framework Programme, carried out a three-year training activity (2010–2012) involving more than 1000 participants in 8 training courses for trainers and over 40 training replication sessions in Europe and Latin America.¹⁶ Grey literature was included as a topic in the training courses on scientific writing delivered as part of the project.

Final remarks

Grey literature is now recognized as an important source of information in every field of knowledge. Its online availability urges authors and issuing organizations to take on new responsibilities in the different stages of the production of such documents and be aware of the technical and ethical implications associated with its wide and

uncontrolled dissemination. The knowledge of the basic editorial standards and guidelines can play an important role in improving the editorial quality of grey literature.

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Common errors to look out for in medical papers

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Abstract An inconsistent manuscript style and inappropriate presentation of the content hinder the legibility and comprehension, thus reducing the influence of a scientific work. In this essay, I describe common errors with style encountered in my editorial practice. These range from seemingly trivial errors with capitalization and italicization to complex mistakes involving the use of the apostrophe in eponymous terms. By addressing these inconsistencies, editors can ensure that papers are well presented and devoid of stylistic issues.

Keywords Medicine, writing, periodicals as topic, terminology as topic, eponyms.

The horizons of science and medicine expand daily, with the addition of new concepts and theories. An avid researcher or physician is pressed to keep up with the constant advances in their scientific fields. Since a published work is the most popular format for the dissemination of essential information, the intricacies of manuscript preparation are of great importance. An integral aspect of this is the style of writing.

Maintaining a consistent and clear style is vital for appropriately describing a researcher's work so that others may follow or build upon it. If a scientist has discovered a way to make pigs fly, but cannot organize the work into a clear and concise form, s/he might be the only one who can boast of a farm with flying pigs.

It is no surprise that many journals advocate the use of a consistent style to expedite the publication of novel and interesting research. As an editor of medical manuscripts, I have come across several types of inconsistencies that affect comprehension and presentation. In this essay, I describe a few of the common stylistic errors and hope to dispel some arguably inaccurate assumptions on the usage of certain terms.

In medical papers, the terms "male" and "female" are more appropriately used as adjectives than nouns. If you introduce a subject as a 20-year-old male, you may well be referring to a male horse, orangutan or any other 20-year-old male animal. Hence, it would be more appropriate to write "a 20-year-old man presented to our hospital."

Two terms that are used interchangeably but have distinct intended usage are "case" and "patient." A "patient" is an individual who has a particular condition and undergoes specific interventions. A "case" refers to the condition with its attendant circumstances. Consider the example "a case with tuberculosis presented to our clinic for treatment." Unless there is a new strain of tuberculosis that can now affect cabinets and cases (possibly a mutant fungal-bacterial lichen), the use of "patient" would be more appropriate in this "case."