

Title of the Satellite Meeting: Grey Literature: Scholarly Communication in a Digital World

Date: August 23, 2019

Location: National Library of Greece, Greece

Identifying, discovering and marketing grey literature in Science in the English-speaking Caribbean: A Case Study of Jamaica's Scientific Information Units

Karlene Robinson

Head, Public Services, The University of the West Indies Mona Library, Kingston, Jamaica
West Indies

Email address: karlene.robinson@uwimona.edu.jm

Maureen Kerr-Campbell

Head, Digitization Unit, The University of the West Indies Mona Library, Kingston, Jamaica
West Indies

Email address: maureen.kerrcampbell@uwimona.edu.jm

Sonia Patrickson-Stewart

Cataloguer, The University of the West Indies Mona Library, Kingston, Jamaica West Indies

Email address: sonia.stewart@uwimona.edu.jm



Copyright © 2019 by Karlene Robinson, Maureen Kerr-Campbell and Sonia Patrickson-Stewart. This work is made available under the terms of the Creative Commons Attribution 4.0 International

License: <http://creativecommons.org/licenses/by/4.0>

Abstract:

The English-speaking Caribbean produces its fair share of grey literature to the global scientific community. However, it has been a great challenge for information seeking communities to acquire and create access to these Caribbean resources. This research identified the factors contributing to the status of grey literature in Science in the English-speaking Caribbean, in particular Jamaica, and raises the profile by advocating for its proper organisation, greater accessibility, and marketing. It is a mixed method survey of twenty one (21) librarians working in information units that disseminate science information within the Scientific and Technical Information Network (STIN) in

Jamaica. Fourteen (14) of twenty one (21) librarians participated in the survey. The findings indicate that the majority of them were very knowledgeable about grey literature. The institutions that they worked in were all producers of grey literature and their clients used it in the execution of their job functions. The majority found it challenging to access grey literature from their own organizations. Seventy five percent (75%) of the participants believed that lack of organisation contributed to the limited use of grey literature in Jamaica. The sharing of information was also identified as a cultural problem. All fourteen (14), one hundred percent (100%) indicated that they would be willing to join a team to organize grey literature and sixty two percent (62%) felt that grey literature should find its way into databases and another thirty eight percent (38%) felt it should be made visible on websites. Ninety three percent (93%) supported the use of seminars, workshops, public media and advocacy as strategies to raise awareness of the value of and to encourage the use of grey literature. The literature also supported the use of digitization as a means of raising awareness through greater access and inevitable exposure of their value to users.

Keywords: grey or gray literature; science; English-speaking Caribbean, Jamaica; open access; marketing; advocacy.

Introduction

Unlike regions such as North America and Europe where there are active and visible networks such as: commercial grey literature databases and listservs dedicated to collating and circulating this type of material, the same is not true of the Caribbean. Discovering the output of grey literature in the Caribbean has very limited support and very loose organization and, hence, the challenge that important, valuable material is undiscovered and therefore not accessible to be used in making valuable contributions that may impact research findings regionally and globally. Grey literature in science has the potential to make sterling contributions to innovation, impact productivity, and spiral growth in any economy, because of the valuable and sometimes unique research material scholars and technocrats have included in these documents. They impact research findings regionally and globally and can influence growth. However, very little research has been done on grey literature in the English-speaking Caribbean Library and Information Science (LIS) community in the last decade, as the focus has been more on creating and acquiring databases and ensuring that students have access to digital material in an attempt to reduce the ever growing digital divide. Thus, work on grey literature is overlooked. Consequently, it appears that not much is known about the grey literature in Science in the Caribbean and hence their impact has not been fully determined.

This research is aimed at identifying the factors that contribute to this ignorance, and what can be done about alleviating the challenges such as organizing them for accessibility, as well as to raise awareness of their existence, and to find ways to market the use of grey literature.

Research Questions

- What are the factors contributing to the current status of grey literature in scientific information units in Jamaica?
- What are the challenges and strategies for organizing grey literature?
- How can the awareness of the value of grey literature in science in Jamaica be increased?
- What are the means to be used in the marketing of grey literature in Jamaica?

Literature Review

Definition and Types

An overview of the literature indicates that there are multiple definitions of grey or gray literature (GL) as there are variances in its spelling. Naimpally et al. (2012: 37) noted that gray literature is hard to define, but includes such formats as technical reports and government reports. A more complete definition is, ‘information 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.’ (Greynet.org). Bandara (1987:1) also refers to grey literature as ‘unconventional literature that never gets published’. According to Paez (2017: 233), ‘Gray literature can include academic papers, including theses and dissertations, research and committee reports, government reports, conference papers, and ongoing research, among others’. Bartolini et al (2017) highlighted the vocabulary found in all grey literature lexicons, indicating the variety and multiplicity of formats: website, thesis, study, standard, software, review, report, protocol, proposal, monograph, map, journal, interview, index, dissertation, directory, conference paper, catalogue, bibliography, article, annual, analysis and abstract, and may even include patents and newsletters which are not included in their list.

Since grey literature is unpublished information not located in commercial publications, it usually does not have an international standard book number (ISBN), or an international standard serial number (ISSN). Grey literature is produced from a variety of organizations, in a variety of formats, for a variety of purposes and, hence, it is challenging to create an umbrella definition for it. Corlett (2011) narrows the definition down to one primary feature when he states ‘there is no simple definition of which literature is “gray” but the key feature is that it is not published and disseminated by commercial publishers, but by organizations where publishing is not the primary activity’ (3). This appears to be the most significant distinction and defining feature from other literature.

This is highly significant because even among the producers of grey literature the term is not used or is unfamiliar, nor is its definition of primary interest. Soomai, et al. (2011) surveyed twenty one individuals involved in a Working Group giving advice on fisheries production and management, including scientists, technical and administrative staff as well as fishermen and owners generally. They viewed the information produced by the group as simply ‘available information’ (59). Soomai, et al. note, ‘it was likely that the term “grey literature”

was unknown or had little meaning for the stakeholders and therefore any publishing differences between grey and primary literature were not considered relevant as stakeholders were mostly interested with fisheries scientific information as a whole' (59). If this is the general status, then it is hardly likely that there will be organization, or awareness emanating from this source. Despite this, the value of grey literature in research in science should not be underestimated.

Value of Grey Literature in Science

According to Paez (2017: 234), 'It may provide data not found within commercially published literature, providing an important forum for disseminating studies with null or negative results that might not otherwise be disseminated. Gray literature may therefore reduce publication bias, increase reviews' comprehensiveness and timeliness, and foster a balanced picture of available evidence'. Mrosovsky and Godirey (2008) noted that in the tropics, the gray literature on fisheries is often the *only* source of information on particular sites or projects, or on particular species ... and distribution and status studies that ignore gray literature may well be misleading (cited by Corlett 2011). Jennions and Moller (2002); Conn et al. (2003) noted that excluding gray literature from meta-analyses run the risk of over representing statistically significant results and large effect sizes, because they are more likely to be published and read. Gray literature must be viewed also as an addition to scientific literature. Genovesi 2005; Simberloff 2009, also note that there is a tendency to put some information such as biological invasions only in gray literature.

Corlett (2011) believes 'even the worst of the gray literature [in ecology] is at least a record of how governments and NGOs have spent other peoples' money' (3). He noted that government departments have access to data that are not available to other researchers and that gray literature commissioned by governments may have large impacts on policy irrespective of its quality. Ferraro and Pattanayak (2006) opined that "an increase in conservation efforts will only be possible when the results can be evaluated and what works and what does not work can be readily seen and made a case for it to be made accessible (4).

Some disciplines are dependent on information from their fields to make decisions. Naimpally et al. (2012) make the point that branches of engineering differ and while some may require current information to make decisions, civil engineers need to study older material to find out, for example, why some bridges fail; and they obtain these from government publications. They further noted that 'conference papers and proceedings are extremely important to computer scientists and engineers since their field expands at lightning speed and the most important developments are often first reported at conferences.' It is a fact that not all conference proceedings get published as do some other forms of grey literature. Bandara (1987) notes 'there are other cases (such as project plans) in which the documents never go beyond the 'grey' stage (4).

Grey literature can play an important role to cover areas that published information may not venture, for obvious reasons. Research findings may be ignored either by researchers or funding organizations when these may have a negative effect on their economic interests.

Bailin and Grafstein (2010a) made the point that solid research findings are suppressed or only appear as gray literature. Commercial publications at times do not create the same publication opportunities for research that challenges prevailing views, as do those that support them. Bailin and Grafstein (2010a: 80) believe that ‘to be unaware of these potential gaps is to leave oneself open to the erroneous assumption that the conclusions reached by researchers published in traditional mainstream venues necessarily represent the full range of scholarly opinions, when, in fact, further investigation in other venues might lead to rather different conclusions’. This is further supported by Bandara (1987: 6) who noted that plans, project formulations and evaluations, technical memoranda, and various data sheets that may never be published and may never justify the expense for them to be organized ‘contain findings observations, data and even opinions resulting from expensive research that is of use in other contexts’.

The value of this type of literature cannot be denied, Osayande and Ukpebor (2012) opine, gray literature is the principal source of indigenous information, and this very useful and valuable technological and scientific information and knowledge have been unexploited and in many cases, lost. Additionally, the sheer volume of grey literature written in science makes it worthy of being identified and made visible. Corlett (2011) found that overall the volume of gray literature, he identified but not seen when he conducted research for a book on Ecology greatly exceeded that of scientific published literature. He noted that an iceberg analogy is unavoidable, if geographically nine tenths of what is done in the region is hidden from sight, in the gray literature and dissertations, we need to make this content visible (5).

Organization of Grey Literature

Corlett (2011) also cited major challenges to the organization of grey literature: interagency rivalries, commercial sensitivity, government secrecy, fear of plagiarism, and lack of funding or technical skills which are supported in the literature. He also noted that quality is likely to remain low as much of the information reported in gray literature is done by ‘inexperienced and isolated nonspecialists’ and although the methods used try to be and usually are scientific, the aims of these reports are rarely mainly scientific’ (4). It is not a secret that this type of literature is not formally peer reviewed or in some instances reviewed at all, leading generally to an unevenness in quality. Another factor contributing to challenge in organization is discovery and access. Companies and governments legitimately restrict access to certain types of information. Where governments are concerned, there are legal grounds for secrecy embedded in security and economic affairs. If the onus for archiving grey literature is placed on ‘inexperienced and isolated nonspecialists’ who do not have the skillset to do so, this is yet another major challenge to access (Corlett 2011). The literature converges around the thought that libraries and information units play a pivotal role in organizing these resources as librarians do possess the requisite skills set and unitedly they can conquer.

However, the major challenge to information units is, to locate them. Grey Literature lacks any strict or meaningful bibliographic control and can be hard to find, and requires specialist searching. Adams et al. (2017) cited Jeffery (2000) as saying that since grey literature is being digitized, its size and influence have increased and there is need to include it in systematic reviews. However, cataloguing and management can become a concern for librarians. If untrained persons assign improper bibliographic information it will impede access. Salmon and Smart (2012) concurred with Jeffrey indicating that improper

bibliographic information can result in poor classification which can hinder retrieval of documents. Hence, there is a need for experienced and skilled cataloguers/indexers.

Increasing Awareness and Marketing Grey Literature through Access and Archiving

Since quality is such a major factor, marketing of grey literature needs to start with the improvement of the quality of the product. Corlett (2011) suggests that ‘large improvements could be made fairly easily if reports were released first in draft form for comments and corrections.’ He noted that ‘a soft pre-release may weaken the public relations impact of the final report, but it would pay off in quality. Pre-submission circulation of manuscripts for comment is [a] standard practice in science’(4). In addition, producers of scientific gray literature must pay attention not only to quality but also archiving and access and could provide a free downloadable pdf of work online and allow discovery by free search engines such as Google or an email address for reprint requests.

Indeed, the Internet is one of the fastest ways to access gray literature and this is where the majority of the scientific community posts their research. However to identify this research requires expert searching. Bailin and Grafstein (2010b) suggest a simple web search using keywords, changing them to increase relevance and narrow the search to domains that are used by governments: such as .gov; and in the UK .gov.uk and nonprofit organizations: .org and in the UK .org.uk and for educational institutions: .edu and in the UK .ac.uk. and to use the advanced search engines of Google, Google Scholar or Yahoo where there is a slotted box allowing one to specify domains and document types and the use of additional search terms such as: ‘data’, ‘statistics’ or ‘tables’ to tease out relevant gray literature. Where online gray literature is invisible to automated software such as web crawlers, Corlett (2011) recommends that inclusion guidelines issued for each database (e.g., for Google Scholar,) be included to routinely boost the visibility of their products. This may require listing reports on a separate page that is structured in a way that makes them easy to ‘crawl’ and thus easier to locate. Additionally, Corlett (2011) recommends that larger documents above 5MB in any language can be uploaded to Google Books by the copyright holder.

Requests for access to certain information from companies are usually considered favourably. To increase access, Corlett (2011) suggests that these companies may simply need to be made aware of the value of these reports to academics and others (4). NGOs can be encouraged to make their data available through open access databases such as DOAJ (Stokes et al. 2010). An archiving solution advanced by Corlett is a central repository for gray literature. Another suggestion is for each organization to set up its own digital repository such as is the case with many academic institutions (4). Open source repositories exist, such as OpenGrey; Dans Data Archive; GreyGuide Repository; GreySource Web Index , have increased accessibility to grey literature globally.

It is important, however, that repositories design policies that are grounded in best practices to provide optimal access to grey literature. According to Lipinski and Kritikos (2018) ‘the treatment of grey literature in university digital repositories is of particular importance due to the ephemeral and changing nature of grey publication types, editions, and formats’ (Rucinski, 2015: 548; see Farace and Schöpfel, 2010). They noted that the access and use of grey literature in these repositories is often achieved via an Open Access (OA) policy but there is a gap in the literature with regards to the best practices for drafting and implementing these policies so as to promote ‘unfettered access’. Their paper analysed the OA policies from a sample of U.S. iSchools, created by cross-referencing the iSchool Directory (iSchools, 2014) with the top twenty-five best LIS programs ranked by U.S. News and World Reports

(U.S. News 2017). They found out that, of the twenty-two iSchools in the sample, all schools have university digital repositories but only fifteen have OA policies. They mapped these policies against variables drawn from the benchmark for open scholarly communication, the Harvard Open Access Project's *Good Practices for University Open-Access Policies* (Shieber and Suber, 2017; 2015; 2013) and recommends the use of best practices for drafting and implementing OA policies based on the analysis of the sampled iSchool OA policies and the Harvard OA policy variables.

Grey Guide is an open source repository and is such a guide to good practices and resources in grey literature. Bandara (1987) visioned a Caribbean Agricultural Information Network to organize agricultural grey literature as well as inventory of all agencies that generate and/or use this type of documentation, and identifying the agencies and what they are interested in, as well as workers within these organisations (1). His view was that such inventories 'prepared with the support of the agencies concerned would be helpful both to identify the documents and their producers at origin, and those to whom they are likely to be relevant and of use... leading to regional bibliographical database' (Bandara, 1987:10).

Currently the English-speaking Caribbean (ESC) already has a number of local databases and networks with archived grey literature in science. For example, UWI Scholar, a platform emanating from The University of the West Indies as well as the Mona Online Research Databases coming from its Mona campus showcases its scholarly output. There are regional academic networks such as Social Science Research Networks (SSRN) and international databases such as EBSCO and Proquest that have subsidiary databases indexing science information from the Caribbean in various formats.

The English-speaking Caribbean and the Status of Grey Literature

The English-speaking Caribbean consists of those postcolonial territories where English is the official language. This includes in alphabetic order: Anguilla, Antigua and Barbuda, Bahamas, Barbados, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, Puerto Rico, Saba, St. Eustatius, St. Kitts and Nevis, St. Lucia, St. Maarten, St. Vincent and the Grenadines, Trinidad and Tobago, and Turks and Caicos. This research is limited to investigating the status of grey literature only in the urban centres of Jamaica which is the largest of these islands, excluding Guyana which though part of the group is not an island. However, the overall aim is to start with examining the status of grey literature in science in Jamaica with a view to developing an action plan or model that can be copied by other disciplines and the other territories in this group.

Methodology

The research design is mixed method, largely quantitative with qualitative data gleaned from librarians working in science-related information units such as libraries in Jamaica. A list of 28 individuals was compiled from the Directory of STIN which comprised their telephone numbers and physical and email addresses. Given the fact that the list is short and the librarians were accessible via telephone and that the survey would be administered electronically, that the entire population was selected as the sample.

It was noted that five (5) of the units on the list were no longer functioning as information units and an additional two (2) libraries were without librarians. The survey was administered using Survey Monkey during one month - May to June 2019. There were follow up calls via emails and telephone calls to encourage participation. The survey consisted of three (3) main

sections: demographics and awareness; challenges and strategies with organisation; and the advocacy and marketing of grey literature. It consisted of twenty one (21) questions: eight (8) focused on demographics and awareness, five (5) on challenges and strategies with organisation, and seven (7) on advocacy and the marketing of grey literature and a single free range question requiring them to give their personal experiences in identifying, discovering and marketing grey literature. Only fourteen (14) individuals out of twenty one (21) or approximately sixty seven percent (67%) participated in the survey.

Findings

Demographics and Awareness

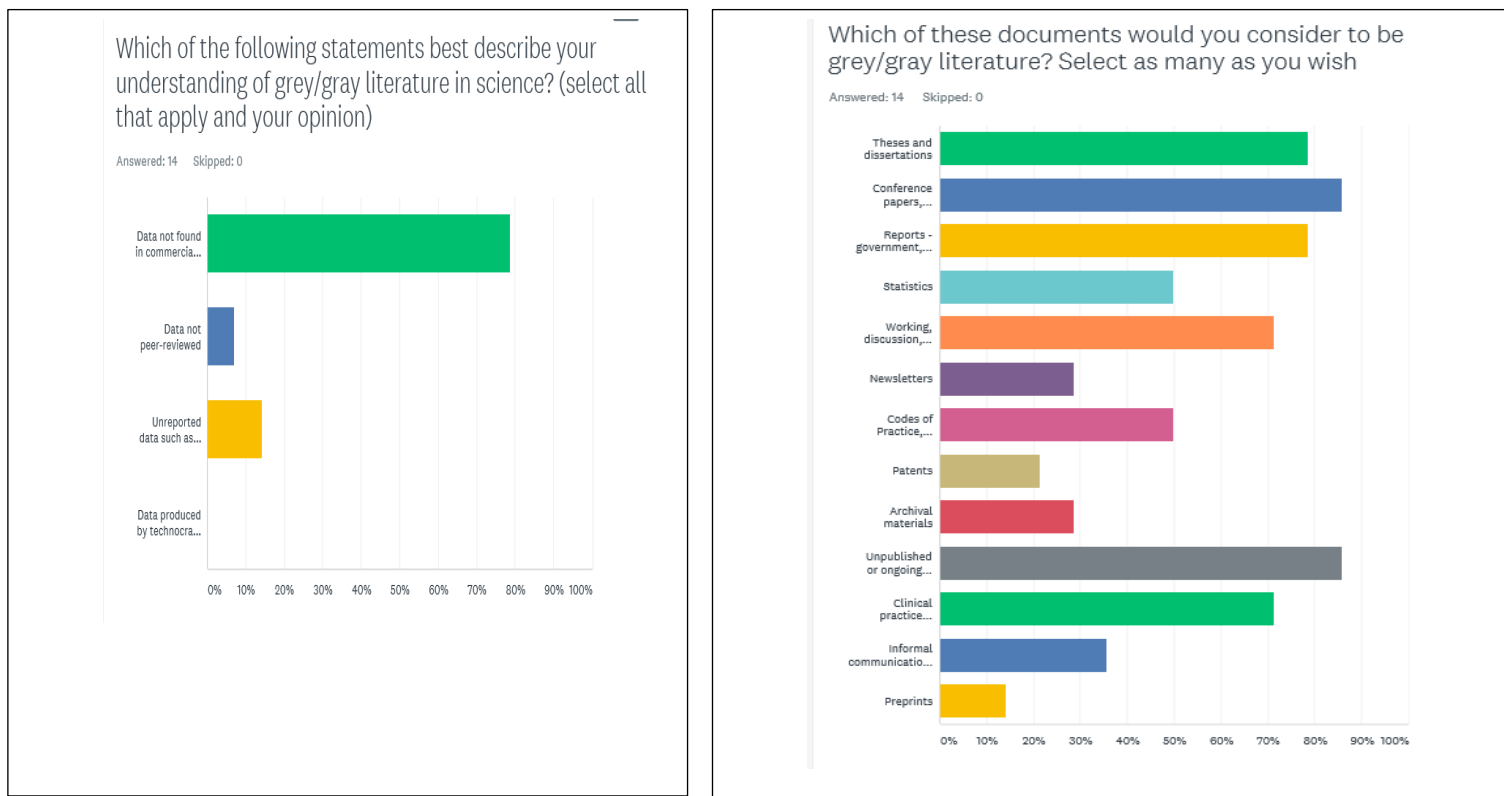


Figure 1: Awareness of grey literature

Figure 1 indicates that the majority of participants in the survey were aware of what is grey literature. Eighty-five percent(85%) of participants surveyed shared their understanding of grey/gray literature as “data not found in commercially published literature such as journals”. This is significant given that Corlett (2011) emphatically stated that the key feature in identifying “grey literature, is that it is not published and disseminated by commercial publishers, but by organizations where publishing is not the primary activity” (3). They also indicated they understood the types of documents that were considered by selecting grey literature in accordance with the literature such as listed by Paez (2017: 233).

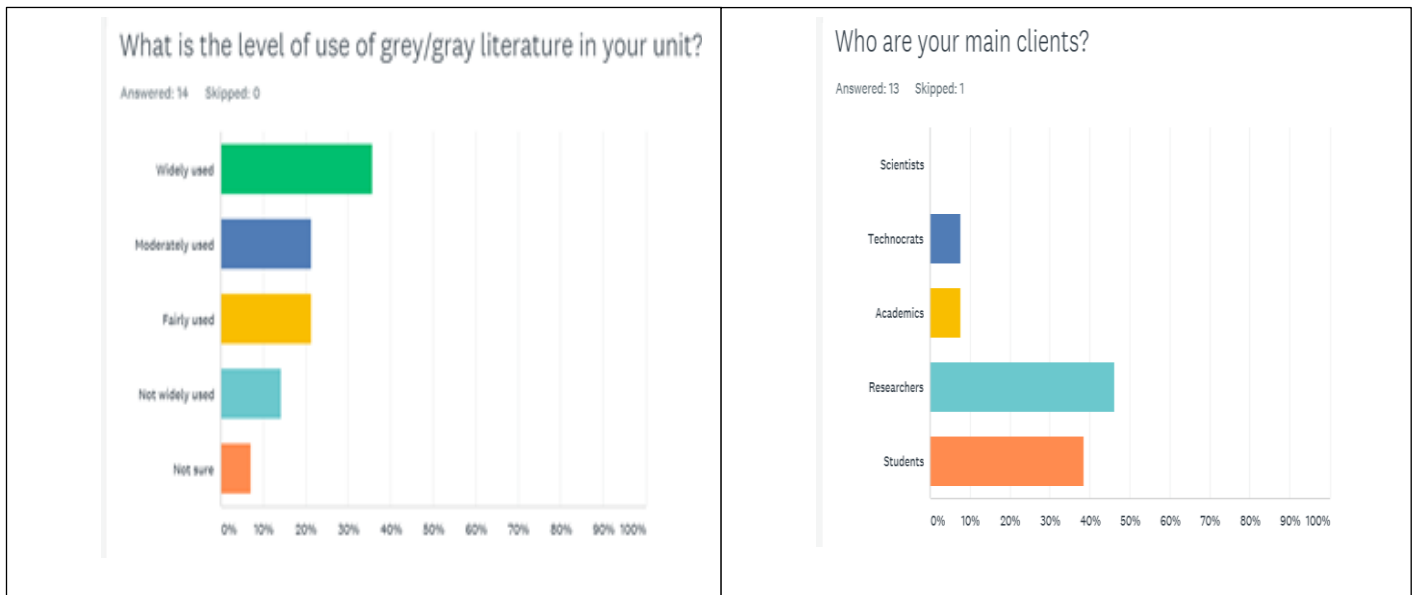


Figure 2: Demographics and level of use

Figure 2 shows that grey literature was well used as eighty percent (80%) registered that they were fairly to widely used. Surprisingly, no participant gave any reasons to support the level of usage in their Units. This sent a clear message that that there was a level of disinterest in finding out this data. Their core clients were researchers fifty percent (50%) and students thirty three (33%) with approximately eight (8%) from both technocrats and academics. The literature shows, while technocrats are mainly responsible for the production of this type of literature, it is used primarily by researchers and students. The literature also indicates that the data used in compiling grey literature come from research gathered in the field and it is important that these are made available to impact the quality of research.

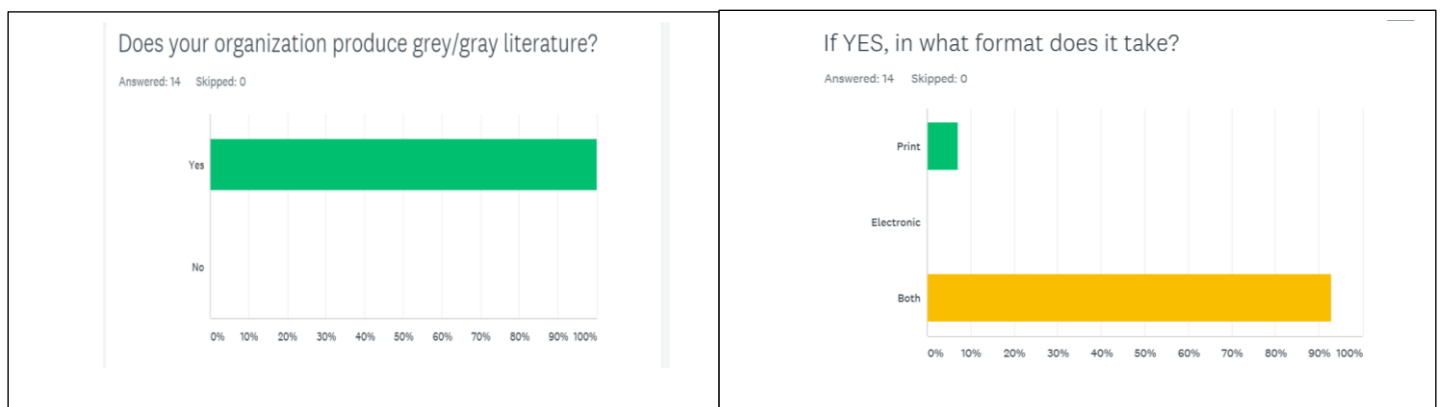


Figure 3: Production of grey literature

All participants confirmed in Figure 3 that their organizations were engaged in the production of grey/gray literature. This was not surprising as most of these institutions are government entities, and have a mandate to conduct research in their respective areas to support and enhance government programmes and or projects. Additionally approximately ninety five percent (95%) confirmed that their organizations produced grey/gray literature in both print and electronic formats, none produced entirely electronic.

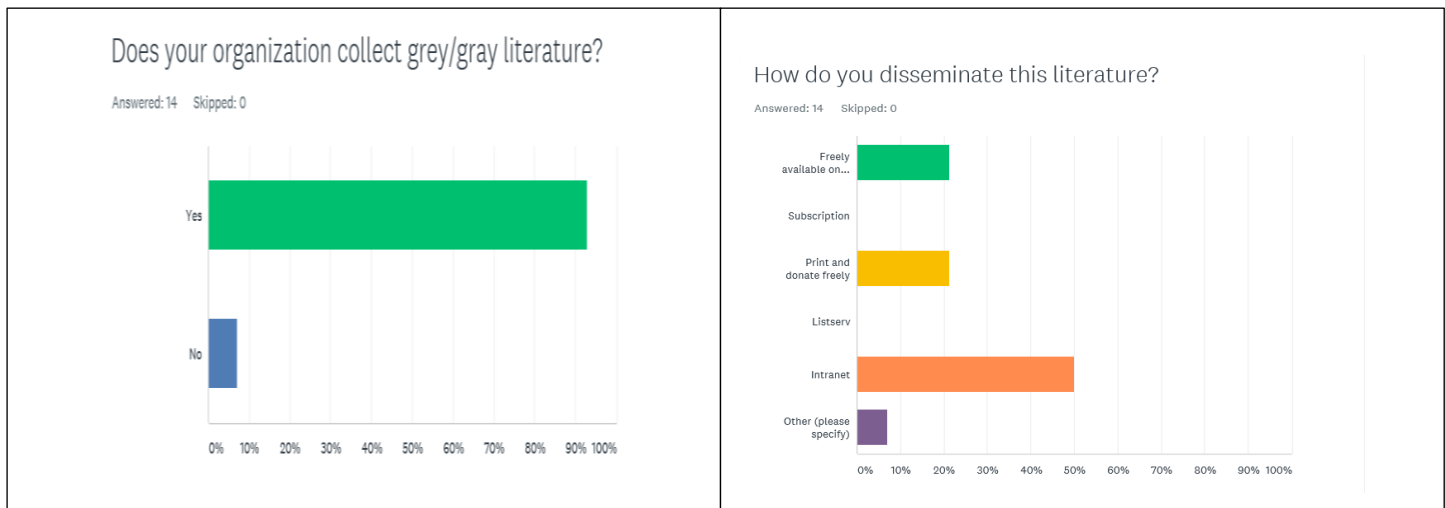


Figure 4: Collection and dissemination of grey literature

Based on Figure 4, ninety percent (90%) indicated that their organization collected grey literature and about the same figure indicated that they disseminated it either via ‘local intranet’; ‘print and donate freely’ or made them ‘available freely on websites’. No participant chose subscription or Listserv as a means of disseminating grey literature.

Challenges and Strategies with Organisation



Figure 5: Search methods and challenges in searching for grey literature

According to Figure 5 the most popular method used in searching is ‘calling government agencies’ sixty four percent (64%) and searching databases (52%). Hand/manually searching through conference proceedings was also considered fairly useful by forty three percent (43%). This is corroborated by Mahood et al. (2014). ‘Calling government agencies’ suggests lack of availability of literature needed as well as a structured method of collection, or the failure of government agencies to provide material willingly.

Most participants fifty eight percent (58%) felt that the main challenge to accessing grey literature was its unavailability. It was also felt that grey literature was not a priority (33%) as implied by Corlett (2011). Mahood et al. (2014) who believe that including grey literature means consulting more evidence from a wider variety of sources, which serves to enrich the overall findings of a systematic review, and reduce publication bias. This speaks to librarians and information specialists understanding the value of grey literature. It also confirms the

need for advocacy and marketing of the literature not only to researchers but also to library professionals.

Figure 5 also shows that fifty three percent (53%) felt that ‘building awareness’ would be the most appropriate way to address the challenges. ‘Public education’ (23%) and the ‘use of professional networks’ twenty three percent (23%) were also considered important mitigation strategies. A free response to give a reason some spoke to the limited local research publication culture and indicated that local producers of grey literature should be encouraged to publish or make them available for use.

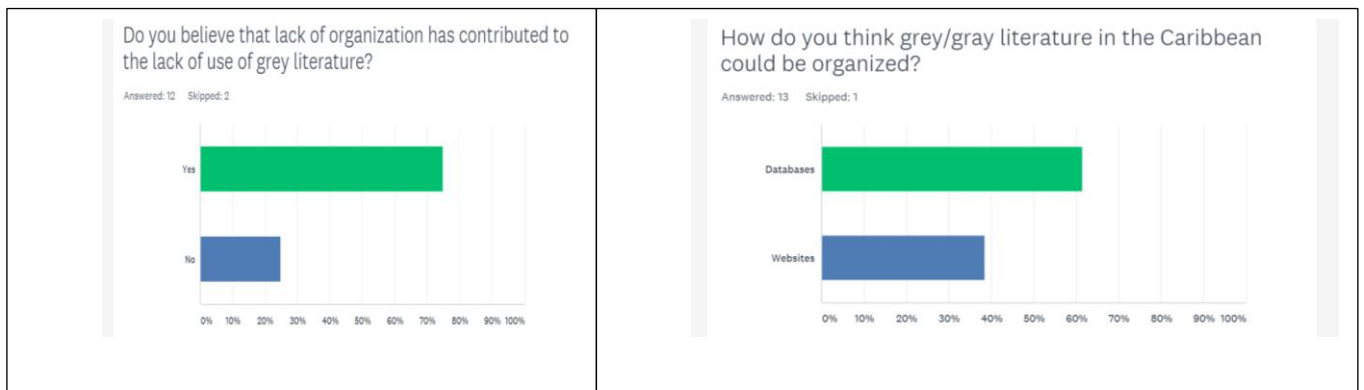


Figure 6: Organization of grey literature

Figure 6 indicates that seventy-five percent (75%) of participants believed that lack of organisation has contributed to the limited use of grey literature in the Jamaica. Also, one participant indicated that locally, there is a culture of not sharing information. However such a view is universal in respect of access to grey literature. Sixty two percent (62%) felt that grey literature should find its way into databases and another 38% felt that it should be made visible on websites. We noted that there is tremendous support in the literature for this (Stokes (2010)).

Advocacy and the Marketing of Grey/Gray Literature

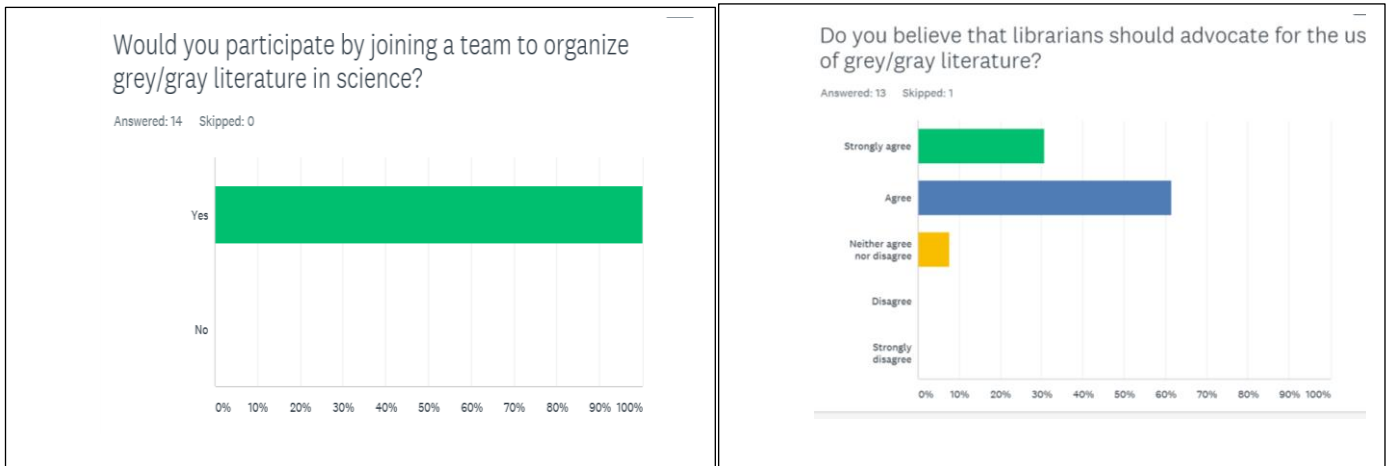


Figure 7: Organization and advocating for the use of grey literature

Figure 7 shows one hundred percent (100%) demonstrated a willingness to join a team to organize science grey literature and librarians felt that this type of literature was important, it was being used and should be accessible to users and that their use could be further increased if it were organized. The response registered a willingness on the part of librarians to commit time to organize this literature reiterating its value.

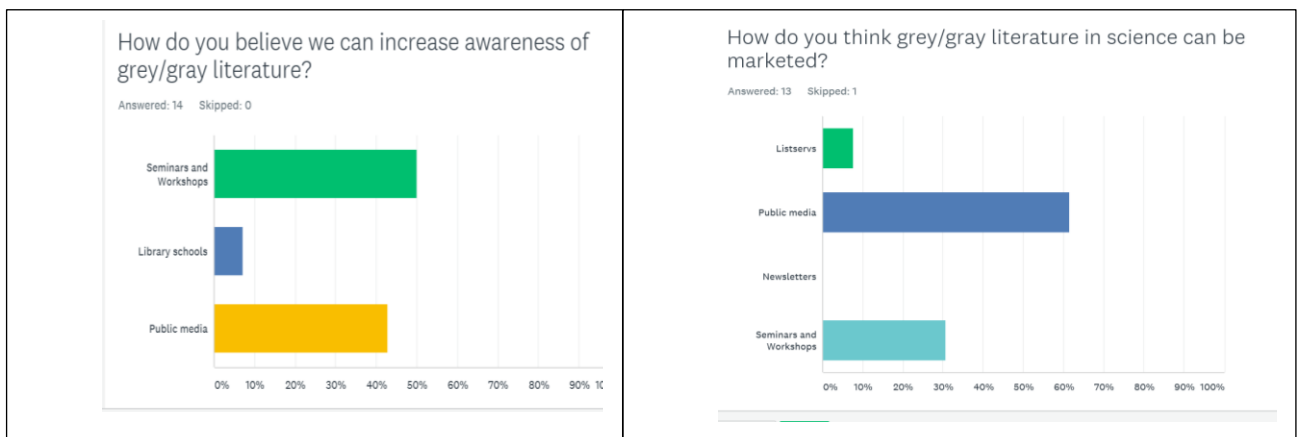


Figure 8: Increasing awareness and marketing grey literature

Figure 8 also indicates that the majority of persons, approximately 93%, did not feel that library schools would be effective in increasing awareness and opted for seminars and workshops and the use of the public media. The response to the two (2) questions posed in Figure 8 showed a preference for the public media fifty percent (50%) and approximately sixty two percent (61.5%) in the second instance and approximately 43% in the first 31% in the second instance felt that seminars and workshops could also be a channel to market it.

This is supported in the literature, as social media is one of the fastest growing publicity media. Surprisingly, only 8 %, that is one individual, felt that Library listservs were useful, and no-one had any confidence in newsletters. These are library-centric media and maybe the thinking is that librarians are already converted, they need to go outside of their fraternity and seek other candidates.

The final question asked, “*What are your experiences with using, identifying, discovering and marketing grey/gray literature?*” was open-ended. Based on the responses it is obvious that many librarians are not actively marketing the literature. A number of them indicated that their organization find it a challenge to make the literature available to the public as the producers of this type of material is not willing to share it. This supports the view of Corlett (2011) who cites legitimate restrictions on the part of government, like secrecy embedded in security, or inter-agency rivalries, and fear of plagiarism in the public sector. Other librarians think that the process of acquiring grey literature is slow and therefore not much enthusiasm is there for their acquisition. Furthermore, they are difficult to locate, cataloguing them is an issue, as well as the fact that they are not readily used in the academy due to uncertainty of the validity of the research presented, or if the author is not popular. Most of these documents however do have corporate authorship and are trade documents. It must also be noted that patrons welcome the availability of grey literature knowing that the information is not available elsewhere.

Some participants responded that they point users to free literature on the Internet, however, they do not think of it as marketing but merely carrying out a job function. This ambivalence is also expressed as a lack of experience with grey literature because they hardly get them. This emphasizes the fact that there needs to be a thrust to market them within and outside of information units. Participants also indicated that clients are usually appreciative when they are presented with new information especially after they were searching for the item before, and had difficulty finding it. These users are likely to spread the word and share how it can be used.

Conclusion

Grey literature has inestimable value hence as Adams et al. postulated grey literature “can make a variety of positive contributions to subsequent inquiry and practice”. However the producers of grey literature are not aware of their value, and hence do not share nor market them or make them readily available. It is a challenge to organize as they are not easily retrieved since they lack meaningful bibliographic control; they are usually not peer-reviewed and sometimes are of poor quality. But their value as shown both in the literature and the findings exceeds any negative features.

It is certainly not ignorance but inertia that is contributing to low status of grey literature in science information units in Jamaica as the survey shows majority of participants are aware of what it is, their clients are demanding it and they are engaged in both producing, collecting and disseminating the literature but there is no active thrust to advocate and market it. There are challenges to access grey literature, as producers are not very willing to share and there is a disinterest in the Library community to organize and collect the literature in a structured way. They are aware of the value but not too committed to advocating currently for its use. STIN librarians, however, see the need for advocacy, and to make the public aware of their value through seminars, workshops, and social media, as the channels to use to let their voices be heard.

Organization and access to grey literature are obvious challenges and participants are clearly willing to not only engage with a team to organize but are willing to advocate and market them in their sponsoring organization as well as via the public media, seminars and workshops.

Recommendations

The initial steps in the process/journey in raising the profile of grey literature is a focused and collaborative approach to ferret out grey literature, acquire and get it organized in order to be in a strategic position to market it to stakeholders. There is need to sensitize stakeholders on the many ways in which grey literature are presented. The list by Bartolini et al. (2017) could be a start in searching and identifying grey literature in science in the English-speaking Caribbean. It is critical that a team work together to formulate a strategy through the use of best practices. The fourteen (14) professionals from STIN can form the core group that can deliver a database of science grey literature following the policy and procedures of GREYNET with everyone in the network engaged in providing the indexing to update such a database. Grey Guide could be adapted as a possible way forward in organizing grey resources in science in the Caribbean. This is highly possible as it is an open source repository and a guide to good practices and resources in grey literature would assist librarians in building good indexing practices in the area.

A website could go a far way in sensitizing, promoting and marketing such an initiative as indicated by Bailin and Grafstein (2010b). This is a way scientists who produce grey literature make their works available to the scientific community.

In addition, library schools should be proactive and introduce courses on grey literature in their programmes. Thus, making the next generation of librarians more agile and responsive to archiving, advocating and marketing grey literature.

Research into this area can be extended to examining the status of grey literature in other disciplines with a view to expanding the reach.

References

- Adams RJ, Smart P and Huff AS (2017) Shades of grey: Guidelines for working with grey literature in systematic reviews for management and organizational studies. *International Journal of Management Reviews* 19: 432-454. DOI: 10.1111/ijmr.12102
- Bailin A and Grafstein A (2010a) The dissemination of research. In: *The Critical Assessment of Research: Traditional and New Methods of Evaluation*. Cambridge: Woodhead Publishing, pp.63-84.
<https://www.sciencedirect.com/book/9781843345435/the-critical-assessment-of-research>
- Bailin A and Grafstein A (2010b) Moving beyond the gold standards: tools and techniques. In: *The Critical Assessment of Research: Traditional and New Methods of Evaluation*. Cambridge: Woodhead Publishing, pp.85-89.
<https://www.sciencedirect.com/book/9781843345435/the-critical-assessment-of-research>
- Bandara SB (1987) Grey literature in the CARICOM Region. *Revista Aibda*, 8(1): 1-14.
- Bartolini R, Pardelli G and Goggi S et al. (2017) A terminological ‘journey’ in the grey literature

- domain. CNR, Istituto di Scienza e Tecnologie dell'Informazione. A. Faedo, Italy: 117-130.
- Conn VS, Valentine JC and Cooper HM et al. (2003) Grey literature in meta-analyses. *Nursing Research* 52: 256-261.
- Corlett RT (2011) Trouble with Gray Literature. *Biotropica*, 43(1): 3-5.
- Farace DJ and Schöpfel J (2010) Grey literature in library and information studies. Berlin: DeGruyter Saur.
- Ferraro PJ and Pattanayak SK (2006) Money for nothing? A call for empirical evaluation of biodiversity conservation investments. *PLoS Biology* 4: c105.
- Genovesi P (2005) Eradications of invasive alien species in Europe: A review. *Biological Invasions* 7: 217-133.
- GreyNet International (2018) Grey literature. <http://www.greynet.org/>
- Jeffery KG (2000) An architecture for grey literature in a R & D context. *International Journal on Grey Literature* 1: 64-72.
- Jennions MD and Moller AP (2002) Publication bias in ecology and evolution: An empirical assessment using the 'trim and fill' method. *Biological Reviews of the Cambridge Philosophical Society* 77: 211-222.
- Lipinski TA and Kritikos KC (2018) How open access policies affect access to grey literature in university digital repositories: A case study of iSchools. *Grey Journal*.
- Mahood Q, Van Eerd D and Irwin E (2014) Searching for grey literature for systematic reviews: Challenges and benefits. *Research Synthesis Methods* 5(3): 221-234. DOI.10.1002/jrsm.1106.
- Mason M (2019) Grey Literature: History, Definition, Acquisition, and Cataloguing <http://www.moyak.com/papers/grey-technical-literature.html>
- Naimpally A, Ramachandran H and Smith C (2012) Designing Information Literacy Assignments. In: *Lifelong Learning for Engineers and Scientists in the Information Age*. California: Elsevier Incorporation, pp.31-47. doi: <https://doi.org/10.1016/C2010-0-67009-X>
- Osayande O and Ukpebor CO (2012) Grey literature acquisition and management: Challenges in academic libraries in Africa. *Library Philosophy and Practice* (e-journal). <http://digitalcommons.unl.edu/libphilprac/700>
- Paez A (2017) Gray literature: An important resource in systematic reviews. *Journal of Evidence-Based Medicine* 10:233–240. <https://doi.orr/10.1111/jebm.12266>
- Rucinski TL (2015) The elephant in the room: Toward a definition of grey legal literature. *Law Library Journal* 107(4): 543-559. <http://www.aallnet.org/mm/Publications/llj/LLJ-Archives/Vol-107/no-4/2015-26.pdf>
- Salmon F and Smart C (2012) The role of the academic library in facilitating scholarly communication. *Caribbean Quarterly* 58 (2-3): 67-78.
- Shieber S and Suber P eds (2017) Good practices for university open-access policies

- (wiki). Harvard Open Access Project. Retrieved from bit.ly/goodoa.
- Shieber S and Suber P eds (2015) *Good practices for university open-access policies*. Harvard Open Access Project. <https://cyber.harvard.edu/hoap/sites/hoap/images/Bestpracticesguide-2013.pdf>.
- Shieber S and Suber P eds (2013) *Good practices for university open-access policies*. Harvard Open Access Project. <https://cyber.harvard.edu/hoap/sites/hoap/images/Bestpracticesguide-2013.pdf>.
- Simberloff D (2009) We can eliminate evasions or live with them: Successful management projects. *Biological Invasions* 11: 149-157.
- Soomai SS, Wells PG and MacDonald BH (2011) Multi-stakeholder perspectives on the use and influence of "grey" scientific information in fisheries management. *Marine Policy*, Elsevier, vol. 35(1): 50-62. <https://pdf.sciencedirectassets.com/271824/>
- Stokes EJ, Strindberg S and Bakabana PC et al. (2010) Monitoring great ape and elephant abundance at large spatial scales: Measuring effectiveness of a conservation landscape. *PLoS ONE* 5: c10294.