The Gap between Scholarly Practices and the Institutional Practices at Dalhousie University

by

Zainab Saud R. Abuabdallah

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To Mom, who proved it is never late to learn and pursue your dreams and to Dad, who is my model of dedication, patience and humility.

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Abstract

Dalhousie's institutional repository "DalSpace" mission is to preserve the university's scholarly output permanently for curation in digital format. The promise of an institutional repository (IR) lies in the benefit given to authors by the increased exposure of their work and thus increasing their research impact and citations. DalSpace administrators have driven depositing scholarly materials by Dalhousie's faculty who do not seem to be enthusiastic about the benefits of the IR. This study tries to explain and assess the gap between DalSpace mission and faculty needs and goals to direct the efforts of DalSpace administrators in the most effective way. The study assesses the faculty's level of awareness of the existence of DalSpace and understanding of the benefits of depositing in it along with the motivations and challenges to deposit. The findings of the study showed that the goals of the authors are consistent with the benefits from the IR. The findings suggests the need to raise the awareness of the IR's existence and the benefits it brings, to clear confusion with copyright agreements conditions regarding depositing materials in an IR, and consider disciplinary differences. Furthermore, the study shows that the surveyed faculty members are willing to comply with a policy mandating depositing in the IR if the copyright agreement allows it and the conditions for that policy does not interfere with publishing in other channels.

List of Abbreviations Used

IR	Institutional Repository
OA	Open Access
OAI	Open Archive Initiative
TCPS	Tri-Council Policy Statement
ROARMAP	Registry of Open Access Repository Material Archiving Policies
STM	Science, Technology and Medicine

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Chapter 1: Introduction

The mission of Dalhousie's institutional repository "DalSpace" is to preserve the university's scholarly output permanently for curation in digital format. An Institutional Repository (IR) is a set of services offered by a university for its community for management and dissemination of their digital content that is a form of Open Access (OA) in which scholarly content is available to the general public for the purposes of education and research without financial, legal or technical barriers other than Internet access (Lynch, 2003; Case and Matz, 2003). The Faculty of Graduate Studies supported DalSpace by ruling that theses must be deposited in the system. In addition to theses, research papers and articles, DalSpace accommodates other media such as video, images and software.

The users of DalSpace can be categorized according to their roles: content providers (or depositors), administrators and searchers. Depositors are people with content to submit to the system, while administrators review deposited works and make sure metadata is appropriate so that searchers seeking knowledge can find them. The goals of depositors and searchers are complementary, depositors want to disseminate their knowledge and the searchers want to gain knowledge.

The promise of an institutional repository (IR) lies in the benefit given to authors by the increased exposure of their work thus increasing their research impact and citations. However, DalSpace, as many other IRs, has a disappointing uptake especially by the university faculty which manifested low rates of depositing content even when the library staff offered to mediate the depositing process.

This study tries to explain the gap between what DalSpace is offering and what the faculty needs are. The goals of the study are to determine: the level of awareness of the existence of DalSpace and understanding of the benefits of depositing their work in it along with the motivations and challenges to deposit.

This paper proceeds with a background information about the scholarly practice, Open Access (OA) movement, institutional repositories and their place in OA and the anticipated outcomes of having content in Open Access medium. Next, related work is reviewed followed by the methodology of this study and the results from it. Lastly, discussion of the findings that fits them in a larger context is presented.

Chapter 2: Background

The Internet has offered many opportunities that contributed to the transition that the publishing of scientific peer reviewed articles has undergone as it has offered a low cost distribution channel (Björk and Solomon, 2012). Well-established journals chose digital publishing as a complementary format to their printed volumes. Furthermore, the opportunity arose for online-only journals which operated based on subscriptions just as the print journals. The major costs of Online-only journal are lower than printing and shipping volumes and include copy-editing, website hosting and the management of a peer review mechanism. With each opportunity, challenges emerge: protection and access restriction are actively subject for debate as to how protect digital articles. On the other hand, Open Access (OA) originated as an online-only business model that does not restrict access to scientific literature. Rather than operating on subscriptions, Open Access charges authors for submissions or relies on other revenue sources such as advertising (Laakso et al., 2011). We will refer to the subscription model as the traditional scholarly communication paradigm that we take a look at, followed by an overview of Open Access.

2.1 Traditional Scholarly Communication Paradigm

The traditional scholarly communication life cycle starts with the creation of new knowledge as a result of research. The new knowledge is submitted to a journal or conference in the same research discipline then undergoes rigorous peer review process and eventually gets published and disseminated to the community of researchers who further build on (Cullen and Chawner, 2011). The *Peer review* process is the evaluation of proposed work by experts in the appropriate field (Merriam-Webster's online dictionary, 2011). Modality of the scholarly

communication lifecycle depends on the discipline and does not necessarily results a journal article but might take other forms. Roosendaal and Geurts (as cited in Cullen and Chawner, 2011) categorize four key function of the scholarly communication:

> Registration: identifying the "owner" of the intellectual property;
>
> Certification: establishing the quality of the research;
>
> Awareness: making the research available to others; and
>
> Archiving: long-term preservation to make the results available to future researchers. (p. 461)

The academic community closely embraces this process of scholarly communication which is integrated in the promotion and tenure systems. Furthermore, the number of journals and published articles is steadily increasing, which indicates the deep commitment to the traditional scholarly communication (Cullen and Chawner, 2011).

2.2 Open Access (OA)

Open Access emerged as an alternative model for the traditional subscription-based scholarly communication facilitated by digital technology and networked communications on the Internet. Publications, including peer-reviewed articles, preprints or data sets, are available to the readers without monetary return for research and education purposes. Current legal copyright law is applied to the works published in Open Access channels which ensures the integrity of the work and grants the authors the rights to be acknowledged and cited (Case and Matz, 2003).

Open Access emphasizes that having free access to research publications is more effective in disseminating knowledge to a wider audience thus increasing the citations of the work and eventually enhancing the author and the institution reputation. This is accomplished

while preserving the work in a digital format, which frees the authors from maintaining it on a personal website or computer (Cullen and Chawner, 2011).

2.2.1 Gold and Green OA

Making scientific literature available through Open Access takes two forms known as Gold OA and Green OA. According to Laakso et al. (2011), the publisher is responsible for making the document available in the Gold OA, whereas the author is responsible in the Green OA.

Gold OA indicates that the content of the actual journal published is available online to some extent. The Gold OA can be categorized to three types based on the journal availability: direct, hybrid and delayed. In *Direct OA* the whole journal is published in OA without any limitation which accounts for the largest percentage of the Gold OA. *Hybrid OA* occur when the author or an institution pays to make an article freely available in a subscription-based journal. Lastly, in *Delayed OA*, the new content is accessible to subscribers only, after a specified period it is made available to everyone.

Green OA else known as self-archiving, is the digital posting of the author's work on a personal webpage, institutional repository or subject based repository whether it is a pre-print or post-print article (Xia and Sun, 2007). An Institutional repository is a set of services a University offer for its community to preserve and disseminate their work, subject based repository, on the other hand, is a repository that allows the authors to self-archive their work in a specific scientific field such as ArXiv and PubMedCentral (Lynch, 2003; Laakso et al., 2011). Personal webpages are considered the most popular channel for Green OA, while institutional repositories are the least popular despite the efforts and guidelines to encourage it (Björk et al., 2010).

2.2.2 OA and Peer-Review Process

When it comes to OA, one of the concerns is the fear of undermining the peer review process. Open Access policies do not ask the authors to bypass peer review process nor specify a certain form of it to lower its quality (Suber, 2009). Notably, open access journals are rapidly increasing their share of peer-reviewed articles, Laakso et al. (2011) found that from 1993 to 2009 peer-reviewed research articles in OA journals had the largest share and fastest growth rate of all peer-reviewed articles. Rather than being intimidated by the "Open Access" label, the quality of the standards of OA journal is what should be examined (Björk and Solomon, 2012).

2.3 Open Access and Research Impact

Research impact is the degree which an article's findings are read, used, applied, cited and built-upon by other researchers in their own work (Harnad et al., 2004). The importance of impact is drawn from its consideration as a measure of progress and productivity of research that the researcher's career depends on (such as funding promotion, tenure and prestige) which the universities co-benefit from and funding agencies reward (Harnad et al., 2004).

Publishing research findings in a peer-reviewed journal is not enough. Other researchers must find these findings useful by using and citing them to consider they had an impact. For other researchers to actually use and cite them, they must be able to access them in the first place. This problem is defined by Harnad et al. (2004) as the access/ impact problem. Open Access with both Gold and Green models provides an answer to the access/ impact problem.

Open Access advocates state that the accessibility and availability of a research article increases the exposure of the work and thus leads to more citations and a larger research impact. Several studies such as the work of Antelman (2004) and Harnad et al. (2004) used different

methods to calculate citation counts for articles and found out the OA articles have the advantage over non-OA articles. However, many of the studies that found the citation advantage had many confounding factors that might explain the advantage. If we suggest that the citations only depend on the availability of the article then we are implying that accessibility of an article is why it is citable and disregarding quality, relevance, originality and influence of the article (Swan, 2010). Other studies sought the truth behind the citation advantage, which tried to account for the challenges that face the experimental design and the proper control needed, suggested that the positive advantage is not solely due to the free availability of the articles but has more complex contributors to it (Craig, 2007). Swan (2010) and Wagner, (2010) have annotated bibliographies of the studies about the citation advantage.

The general OA advantage comes from the article reaching new possible audiences who did not have access to them before. Davis et al. (2008) showed that OA articles reach more readers than subscription-based articles. Other factors that contribute to the OA advantage are: early access, selection bias and quality advantage. The earlier an article is available to potential audience, typically as a preprint in subject repository is the early access advantage. Selection bias occurs from the fact the authors more readily make their better articles OA especially through self-archiving. The better the articles are in OA, the more likely they are cited, which is the quality advantage (Swan, 2010; Craig, 2007). Davis (2006) adds another factor, article duplication, which is specific for OA journals that make an electronic copy of the printed article available; this increase the chance of the article being read or cited.

2.4 Institutional Repository (IR)

An institutional repository (IR), as defined by Lynch (2003) is "a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members" (p. 2). An IR is often considered to be representative of the intellectual life and scholarship of its university which makes it an organizational commitment to practice stewardship on this scholarly output by documenting, preserving and making it available in a digital form (Lynch, 2003). The widespread creation and development of institutional repositories establishes confidence in the long term preservation of digital materials which subject-based repositories does not guarantee (Cullen and Chawner, 2011). Furthermore, IRs extends the range of knowledge that can be shared and disseminated (Yeates, 2003).

2.4.1 Open Archive Initiative (OAI)

Institutional Repositories are considered to be OAI compliant, which means that they follow a standard protocol for tagging the critical information such as author name, title and date. OAI compliant archives are interoperable, which means that they can be all harvested into a single, global, searchable archive (Harnad et al., 2004). IRs benefit from search engines such as Google Scholar and thus attract more potential readers (Laakso et al., 2011). Search engines are trying to index as much content as possible and IRs have the content that needs to be indexed, being OAI compliant makes it easier for the search engine crawlers to discover IR content and thus index it (McCown et al., 2006).

Chapter 3: Related Work

Institutional repositories received high adoption rates worldwide, the Open Directory of Open Access Repositories (OpenDOAR, 2014) lists a total of 2197 of IRs, which account for 82.8% of Open Access repositories and shows that number of IRs grew steadily since 2006. Developing and improving IR's technology should be done with a deep understanding of the people who will use it along with the task and goals they are trying to accomplish and what conditions or environment they will use it in (Hackos and Redish, 1998). Usefulness and satisfaction as indicated by Shearer (2003a) are important determinants of the success of an IR. *User satisfaction* is the degree the users believe the system meet their information needs is closely related to their contribution of content (or input activity). *Usefulness* is assessed by the usage statistics of the system when other people find content. If the IR has significant amount of content, the more likely the scholars will use it. Conversely, it is more likely authors will contribute content, if the IR is highly used. However, related discussions about IRs have moved from the great promise they hold to the disappointing reality that have not lived up to that promise (Choudhury, 2008). The major obstacle that led to this result is the difficulty of content recruitment as scholars were not as enthusiastic about self-archiving as they were expected to be.

Xia and Sun (2007) evaluated nine repositories across different countries in which the content was large enough for an in depth analysis. They found that most of the content was deposited by non-authors and not in full text. Shearer (2006b) reports similar findings resulting from other evaluations. The authors indicate that unawareness of the existence of an IR at an institution might be the main reason of the disappointing uptake. However, even when IR managers promoted the repositories and raised the awareness of the benefits of it between faculties, a small short term improvement happened. Scholars did not have the time or inclination

to deposit their work although the process required several minutes to accomplish. IR managers offered mediated deposits to scholars, who show their support of the IR, which showed a positive impact. However, this is hindered in some cases by those who neglect to provide their work to be deposited and thus the rates of self-archiving continue to grow slowly.

In a study by Davis and Connolly (2007) to evaluate the reasons for non-use of Cornell University's IR, the authors found that faculty had little knowledge and motivation to use the IR and generally had no problems with accessing latest research. Faculty mostly used subject repositories which are perceived to have more community salience than an IR which they considered redundant to other modes of dissemination. Also, the study showed a common misconception among faculty on the IR search capabilities and the fact that the items are indexed in the Internet's search engines. Other concerns the faculty gave were: learning curve as the technology is new, confusion with copyrights agreement conditions about OA publishing and fear of plagiarism.

To overcome the obstacle of content recruitment, there is a need to establish an understanding of the researchers' needs of an IR. Foster and Gibbons (2005) tried to understand the faculty needs by observing their work practice and interviewing them. Their study confirmed that the main goals of the researchers were about disseminating their work, finding others' work to keep up in their fields, ensuring the files are viewable and backed up along with other concerns related to versioning and co-authoring for their current research. Foster and Gibbons indicate that although the researchers think in terms of reading, researching, writing and disseminating, they do not respond to the IR enthusiastically. The authors attribute this result to the disconnection between IR promotional language and the researchers' perceptions of the benefits.

Kim (2011) considered four categories of factors affecting the faculty participation in IRs: costs, benefits, contextual factors and individual traits. The **cost factors** identified in the study are copyrights concerns and additional time and effort needed to participate in IRs. Uncertainty about copyrights agreement conditions about OA publishing is identified in many studies as a barrier which makes the authors choose to avoid self-archiving to be on the safe side, although 90% of the journals are 'green' in that they allow self-archiving practices (Harnad et al., 2004). Due to the busy life the faculty lead, any additional time and effort is not favored unless it is strongly justified.

The **benefit factors** were categorized as: intrinsic and extrinsic benefits where the intrinsic benefit is described as *altruism* conveying the desire to share the scientific knowledge for the benefit of others, which in turn, result a high research impact. Extrinsic benefits identified in the study are: accessibility, publicity, trustworthiness, academic reward and professional recognition. Accessibility is established from the IRs interoperability, where they share the standard with other types of repositories that enables them to be harvested by other services and search engines. Moreover, materials in IRs are provided with persistent identifiers and thus are assigned unique URLs which make them unique and unbreakable. The increased accessibility can lead to increased publicity and thus a wider readership. Trustworthiness is based on the document quality which is typically judged by peer review process, journal prestige, authors' or institutions' reputation. Academic reward in tenure and promotion is based on academic performance based mostly on publications quality and quantity. Such systems have great potential to motivate OA publishing and self-archiving but mostly they only support the traditional scholarly communication. Ziman indicates that professional recognition in the sciences is about publishing in reputable journals, citing the research by other scientists and

attributing the ideas to the author which is closely related to the publicity factor in regard of research impact (as cited in Kim, 2011).

The **contextual factors** that Kim examined were self-archiving culture, trust and influence of external actors. Self-archiving culture of disseminating pre-prints is often assumed to have a positive relationship with the likelihood of depositing in IRs, Xia and Sun (2007), however, questioned this assumption in their study where their findings did not find any correlation between them. Trust in the IR on the other hand, is about the faculty perception of it as a source based on reliable technical standards to retrieve content of high quality and trust of the library's long-term commitment to it. External actors, such as universities or grant funders, were shown to motivate faculty to contribute to IRs.

The last category of factors that Kim examined was **individual traits** including professorial rank, age, technical skills and number of publications per year. The study showed that tenured professors were more likely to self-archive in IRs since they are relieved from the pressure of seeking publishing in prestigious channels and are more willing to experiment with other models. Among all of these categories of factors, Kim found that accessibility, altruism, trust and copyright concerns were the most significant factors to affect faculty contribution to the IR.

Ferreira et al. (2008) of the University of Minho, tackled the problem of the slow rates of deposits by undertaking several activities in their strategic plan. They started with a promotional plan at included internal talks, training seminars, flyers and contact with departments' directors. Next, they created value added services such as downloading statistics and researchers webpages. The most effective measure they implemented was a self-archiving mandate policy

and a financial incentive given to the department with most deposits. The authors could not distinguish the effect between the policy and the reward incentives because they were implemented simultaneously. Other studies reported that mandate policies drastically improved content recruitment, such as in the work of Xia (2007), Gargouri et al. (2012), Jantz and Wilson (2008) and Xia et al. (2012). Self-archiving mandate policies are being implemented worldwide and are steadily increasing (Gargouri et al., 2010). The Registry of Open Access Repository Material Archiving Policies (ROARMAP, 2014) shows a total of 207 institutional mandates worldwide. Although great growth and benefit can come from a mandate policy, Kennan and Wilson (2006) acknowledge that a policy alone is not sufficient for the success of the IR. It has to be accompanied by services that address the faculty needs and concerns such as those described by Foster and Gibbons (Kim, 2007).

ALJohani (2013) conducted a heuristic evaluation of Dalhousie's DalSpace, which uncovered several usability issues in the interface that needs to be addressed. Furthermore, she formed user profiles that identified potential users of DalSpace and fully described each category with the background, needs and tasks they accomplish with the IR. As much as it is important to understand the technology to create IRs and improve them, it is crucial to know the users, the task they want to accomplish and the environment they will use it in to inform the design decisions. In the end, the users are who decide to use the system or not (Hackos and Redish, 1998). The users ALJohani identified were undergraduate, masters and PhD students and librarians. However, faculty member were not considered in her study. Mainly, the users wanted to find and download academic articles, improve search accuracy, share educational materials, find the service easily through departments' webpages, find helpful resources and tutorials about

the service, share content through social networks, have statistical information about each article and have a feedback system for reviews or ratings.

In our study, the users of DalSpace are classified as depositors, searchers or administrators. This classification takes a broader view to identify users based on their roles and thus identify the needs of each category. As the previous research indicates, faculty members have the most potential of contributing to the IR due to their active involvement in research and publications and thus being the holders of the content to contribute to the IR. ALJohani's work identified the usability problems with DalSpace and attempted to identify the needs of some of the users, who are mostly searchers. We take her work further by focusing on depositors, specifically faculty members, to understand them better to suggest further improvements to DalSpace.

Chapter 4: Problem Statement

This study explores the current scholarly practice of Dalhousie University faculty to uncover their needs in order to improve Dalhousie's institutional repository "DalSpace". As the faculty's depositing rates are low, it became necessary to explain and assess the gap between the DalSpace mission of preserving the university's scholarly output and the faculty needs in that respect. Insight into such information will direct the efforts of DalSpace administrators in the most effective way. We try to assess the faculty's level of awareness of the existence of DalSpace and understanding of the benefits of depositing in it along with the motivations and challenges to deposit. Furthermore, we try to uncover other needs that might further motivate them to contribute to DalSpace.

Chapter 5: Method

An online questionnaire, created using the Opinio survey tool housed in Dalhousie's servers, was distributed by e-mail to faculty members in March and April of 2014. The targeted faculty ranged in ranks from full professors to instructors. The survey started with a simple consent form explaining the objectives of the study and topics of the questions. A total of 22 questions covered background data (such as: academic title, number of publications and number of years working in research), copyrights management, motivations and goals to publish research, level of awareness of the IR existence and purpose, features that are important to have in a repository, if other channels are used and what kind of data the faculty have to deposit under what condition or restrictions (See Appendix A for full questionnaire). These questions were based on the goals determined in a meeting with the library staff who manage DalSpace. Taking these goals into account, the questions were created based on reading of literature specifically: the works of Kim (2011), Cullen and Chawner (2011), Swan (2006), Davis and Connolly (2007) and Pelizzari (2003). The meeting with the library staff shaped an understanding of the mission and goals of DalSpace and defined those areas of interest that questions covered that were enforced by findings from the literature to try to explain the gap between DalSpace mission and faculty needs. The purpose of the questions is to provide a basis of user analysis. The users of DalSpace were identified in the meeting and were classified as depositors, administrators and searchers. According to Dalhousie's Director of Research Ethics (Catherine Connors, e-mail communication sent 2014-02-20) this project is exempt from Research Ethics Board Review per TCPS article 2.5, considering that it is for DalSpace quality improvement.

The data from the questionnaire was imported into Microsoft Excel for analysis. To keep valuable information, a response was kept if the respondent answered at least the second set of questions concerning copyright management. Furthermore, the respondents were asked at the end of the questionnaire, if they would permit having a follow up interview. This only got three volunteers by the end of April who all unfortunately apologized when contacted for not having the time. The recruitment process is fully described in the following Chapter.

Chapter 6: Results

Two strategies were used for recruitment: the first was by sending all of the university's departments' secretaries a requested to forward the questionnaire to the faculty members of that department. There was no telling if the request was sent to those faculty members but the ones who confirmed: Business and Social Sciences, Bioethics, History, Ophthalmology, Family Medicine, Mathematics and Statistics, Biology, Resource and Environmental Studies, Animal and Plant Sciences, Process Engineering, Political Science, Mechanical Engineering, Health and Human Performance, Dentistry and Pharmacy. The second strategy was to gather as much individual faculty e-mail addresses as possible to request filling the questionnaire individually. In total, 945 addresses were gathered. One of those addresses was the mailing list for faculty members in the Faculty of Computer Science. This list of addresses was collected from all the faculties of the university except the Faculty of Medicine due to time constraint and was sent once on the 7th and 8th of April. The first strategy had 33 responses out of 54 but had a longer time to be answered compared to the second which had 21 responses, a shorter time and was sent at the end of the semester which is a busy time for faculty members. Reflections on the study are in Section 8.1.

Next, an overview of the responses gathered in the questionnaire is given starting by the background information, scholarly output, copyright management, research motivations, OA publishing and institutional repository awareness and usage. A total of 25 responses were filtered out of 54 which were complete enough to be analyzed. All of the responses are listed in Appendix B starting by the 25 complete responses then the incomplete ones. The 25 faculty members that answered the survey ranged in ages between 31-69 years old and 2 respondents did

not give their age. Respondents varied in disciplines with 11 from Humanities fields, 4 from Management, 2 from Medicine, 2 from Science and 1 from each of Engineering, Dentistry, Architecture, Computer Science and Health Professions; 2 respondents did not give their departments name. The years the respondents spent in research ranged from 5-50 years. As for ranks there was a total of 9 full professors, 6 assistant professors and 9 associate professors and one answered as being "limited term". Number of total publications ranged between 2 to 300 which is expected due the years in research and the nature of the discipline (See Table 1).

Table 1

Ranges of number of publications

Publications	**Number**
2 – 25	11
25 – 50	9
100 – 300	4
Total	24

As for copyrights assignment, most of the respondents assigned their copyrights to their publishers (Table 2).

Table 2

Copyright assignment to publishers to get published

Answer	**Number (%)**
Yes, freely	14 (56%)
Yes, reluctantly	10 (40%)
No, I retain my copyrights	1 (4%)
Total	25

The only respondent who reported that the copyrights were retained is from English department and granted the publisher exclusive license for the first publication only. Three other respondents

indicated that they granted the publisher an exclusive license for the first publication although they answered that they assign their copyrights to the publishers. When asked about if the copyright agreement allow self-archiving in IRs, 10 out of 22 did not know; 7 reported that it is allowed and 5 reported it was not (Table 3).

Table 3

Copyright agreement allows depositing in IRs

Answer	**Number (%)**
Yes	7 (32%)
No	5 (23%)
Do not know	10 (45%)
Total	22

When respondents were asked if they made material freely accessible online, 18 out of 25 (72%) did; which varied in being research materials, educational or both (Figure 1).

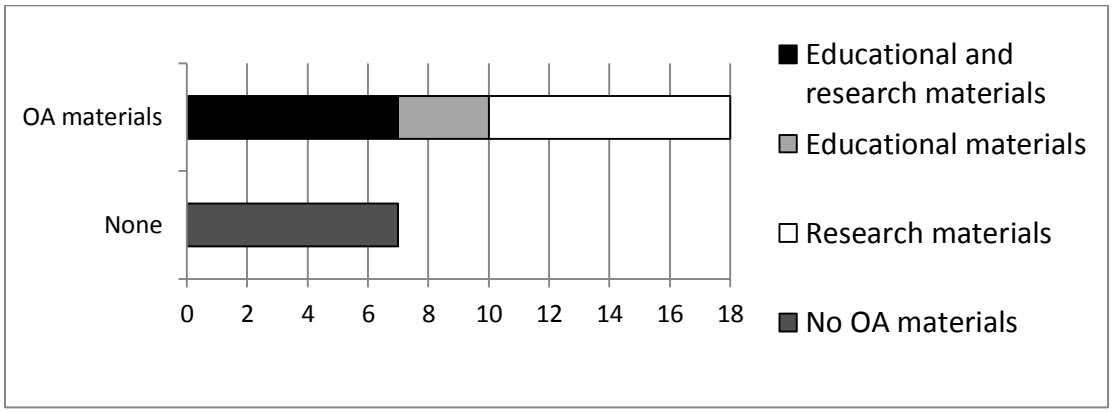

Figure 1: Respondents' ownership of OA materials

The respondents who did not make their materials OA were from: English, Theatre, Music, Dentistry, History, Business and one anonymous. Most of the 18 who made their materials OA posted them on webpages: personal, department, research group or lab as

illustrated in Figure 2 along with other channels which one respondent indicated using social media as the "Other" option.

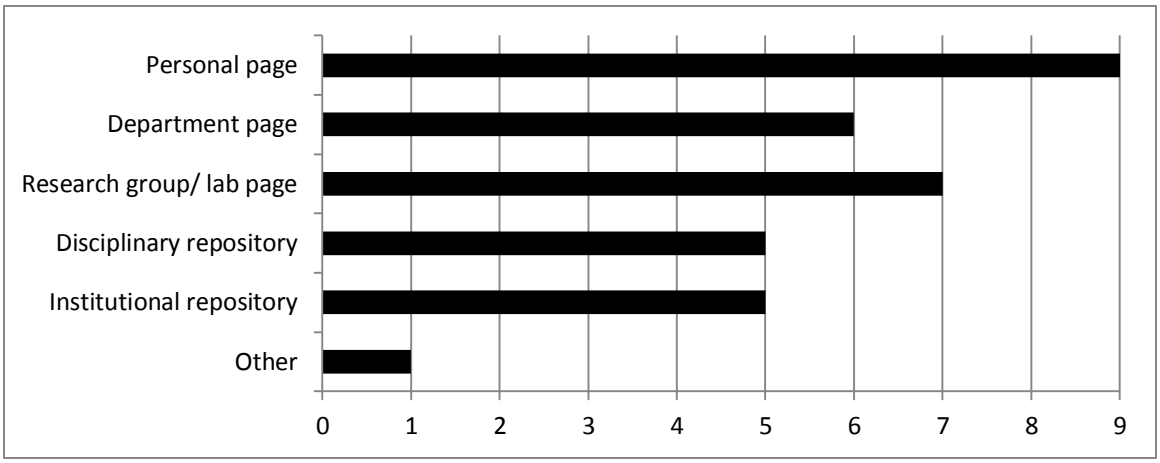

Figure 2: The OA channels the respondents use

Respondents rated factors that motivate them to research on a scale out of five from "very important" to "not important". The ratings the respondents gave are given in Figure 3. Altruism, evident in communicating their findings to peers and enthusiasm for subject field, received the highest rating of importance among respondents; with the exception of one from classics that only rated enthusiasm for the field as a motivation.

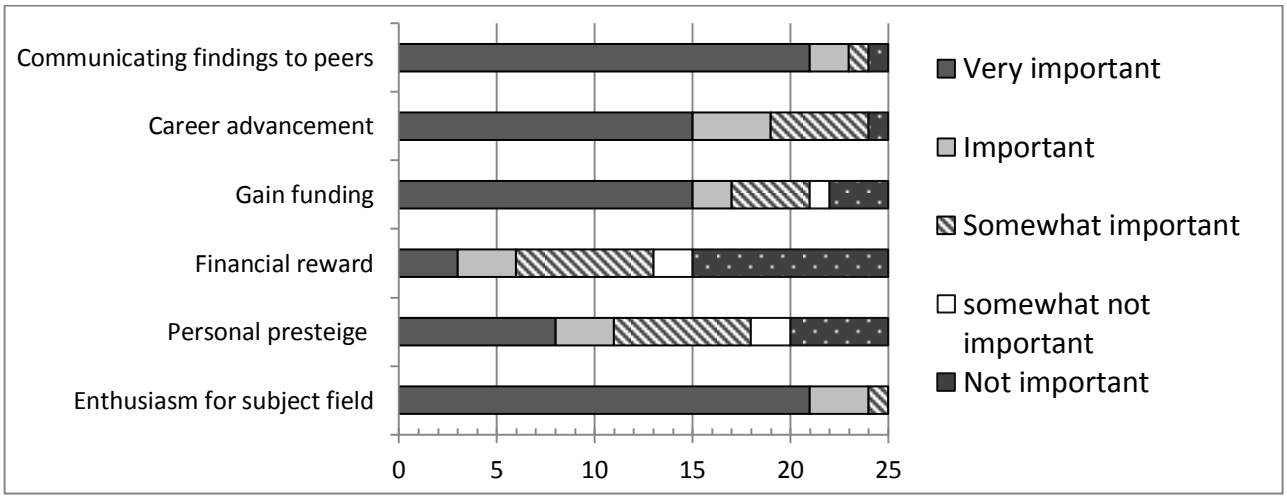

Figure 3: Motivations for research

To advance their career and to obtain funding were the factors with the second highest rates. One of the respondents who reported that gaining funding was not important indicated that it is a facilitator of research and “I don't do research in order to gain funding, I seek funding in order to do research”. As for financial reward, the reason of adding it as a motivation is to see the faculty reaction to it as an incentive. Three respondents rated it as very important (12%), 3 (12%) as important and 7 (28%) as somewhat important. Some respondents gave other motivations such as: “Figure out the truth, solve world problems”, “Curiosity about the unknown. Discovery of the truth. Creativeness”, “Excitement to engage with both theoretical and practical uncertainties”, achieve change and to “aim for excellence” which can be regarded under the previous factors especially as enthusiasm for the subject field.

The respondents gave the degree of their agreement to statements that cover the following subjects: possible issues in self-archiving, benefits of OA from their perspective, possible conditions and restrictions on self-archived materials, features to be supported in the IR and willingness to self-archive. Figure 4 shows the ratings of the possible issues facing faculty self-archiving. Regarding copyrights issues in OA, 11 (50%) of the respondents need their publisher permission, whereas 7 (32%) do not and 4 (18%) were not sure if they did or not. Similarly for the co-authors permission, 10 (45%) needed it, 4 (18%) for each: neutral, do not need it and don’t know. Sixteen respondents (84%) have no problem accessing research literature. Of the respondents who did not have access, two were from the English department and one from Earth Sciences. As for the self-archiving process, 14 (74%) found it time consuming and 9 (47%) regarded it as difficult. All of the 9 who found it to be difficult, found it to be time consuming as well.

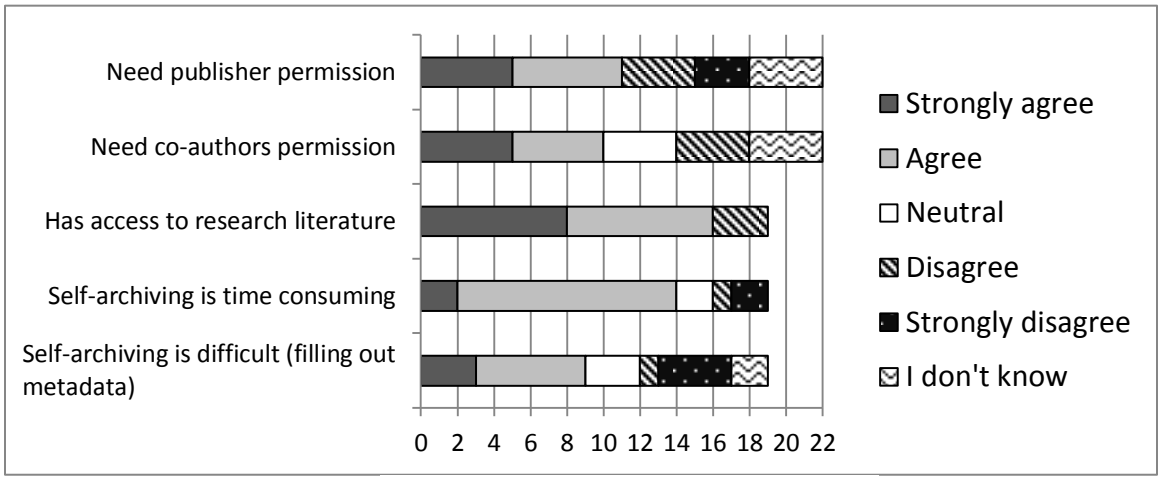

Figure 4: Possible issues in self-archiving

Figure 5 shows how the respondents see the benefits of having their material in OA and whether they are interested in having their work to be highly accessed through search engines and digital libraries. Eighteen (82%) agreed on reaching wider audience, 16 (76%) agreed that it has larger impact and 13 (68%) agreed it has more citations. Eighteen (95%) of respondents are interested in getting their work indexed by search engines and 12 (63%) are interested in digital libraries.

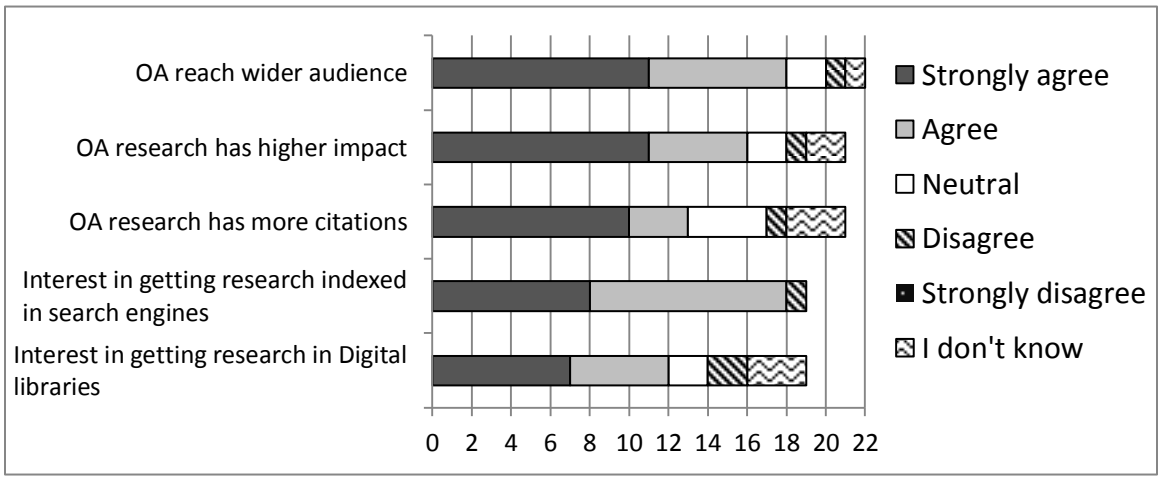

Figure 5: OA benefits

A total of 14 (68%) of the respondents indicated that they are willing to self-archive under conditions and restrictions (shown in Figure 6). Thirteen (65%) respondents rated that the

materials should not be available only through registration, while 2 (10%) rated that they should. Fifteen (71.43%) have no problem with the materials being available to download while 2 (15%) want it strictly for viewing. Sixteen (80%) disagreed with the materials being temporarily available but 2 (10%) agreed on that. Fourteen (74%) want the format of their materials to remain unchanged. Nine (50%) of the respondents do not think that only peer-reviewed materials should be archived in the IR while 5 (28%) require that only peer-reviewed to be archived. When asked again about willingness to self-archive under their conditions after answering the previous questions, 15 (83%) indicated they will although the first time it was 14 (68%) out of 21 respondents and the second out of 18.

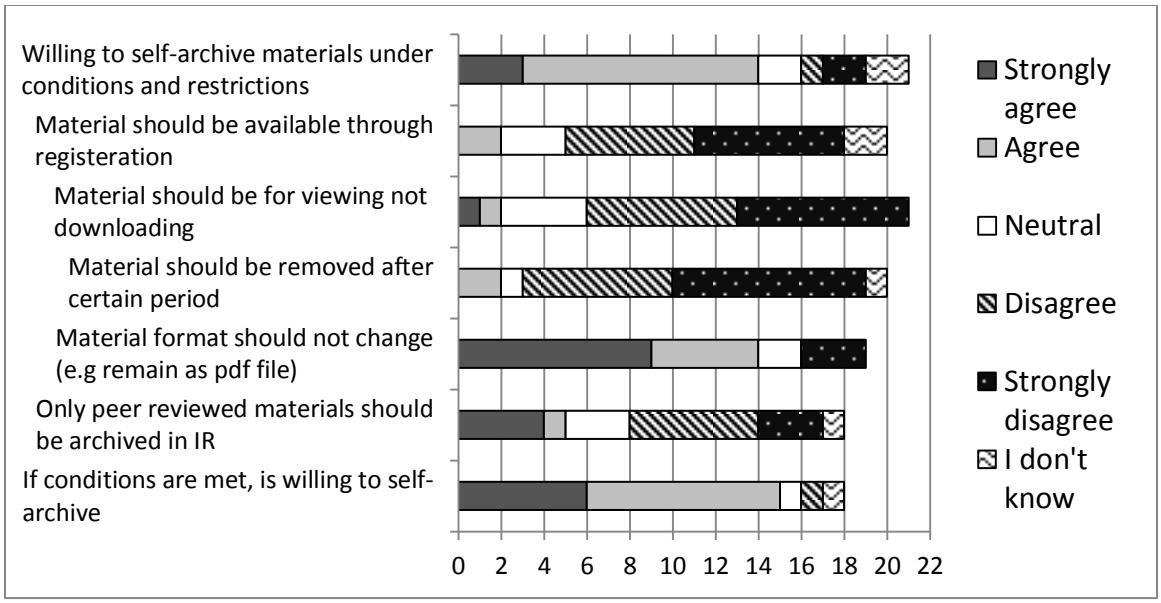

Figure 6: Conditions for self-archiving

On account of DalSpace support of various formats, respondents were asked if they had other materials other than papers to archive such as images, data and software. Seven (37%) indicated they have and 8 (42%) do not (Figure 7). Furthermore, as DalSpace does not currently have usage metrics and statistics, the respondents were asked to rate their need for such metrics.

Eleven (55%) indicated their need for such metrics and 5 (25%) indicated they did not (Figure 7).

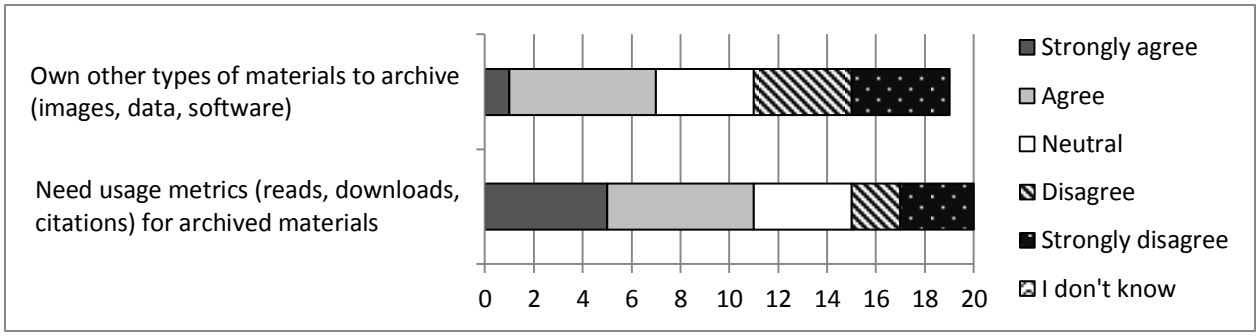

Figure 7: Features in an archive

The respondents' willingness to contribute under the suggested solutions described in the related works previously is shown in Figure 8. Mediated deposits received positive approval from 10 (53%) and a total of 11 (47%) whom were neutral or did not know. Eight (42%) indicated they are willing to self-archive for tenure and promotions, 6 (32%) are not and 5 (26%) were neutral or did not know. When asked about their willingness to comply with a university policy mandating self-archiving, 9 (47%) for each who will and who are neutral or not sure also with only 5% of who will not (which is 1 out 19).

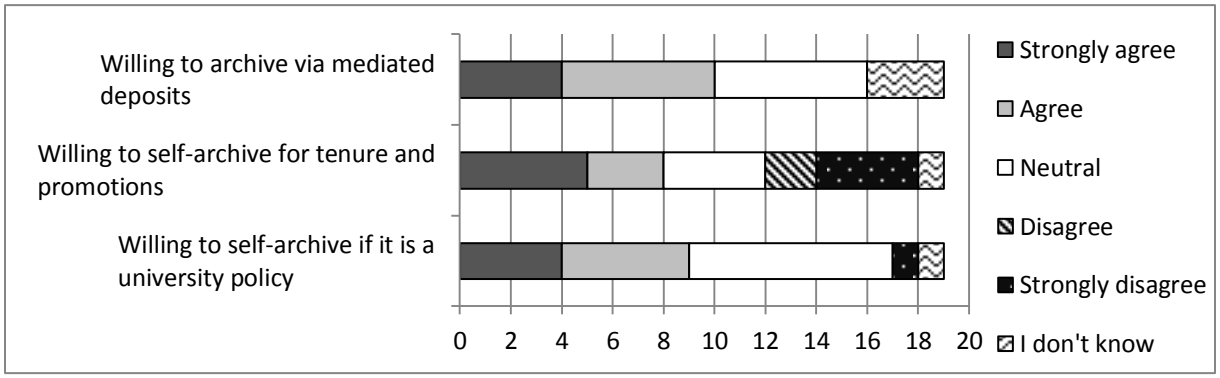

Figure 8: Willingness to contribute to the IR under suggested solutions

The respondents were asked if they knew if Dalhousie has an IR without indicating that it is DalSpace (Figure 9). Then they were asked about how familiar they are with DalSpace without

indicating that it is an IR (Figure 10) to see if the respondents knew it as it is intended to be known or not. A total of 8 out 18 (44%) of the respondents knew that an IR exist in the university and a similar percentage of 45% (8 responses) who were familiar with DalSpace indicating they know its purpose. Of the 8 who knew of an IR existence, 7 considered themselves to be somewhat familiar and 1 as not too familiar. Only one respondent who did not know of an IR existence rated familiarity with DalSpace as very familiar. Figure 11 shows the respondents familiarity with the OA initiative which shows a similar distribution to the IR awareness and DalSpace familiarity (Figures 9 and 10).

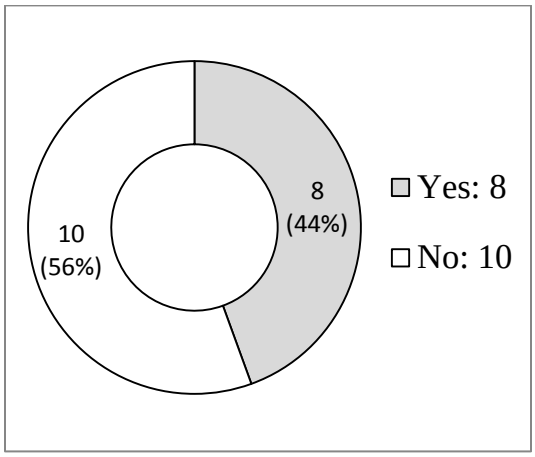

Figure 9: Awareness of IR existence

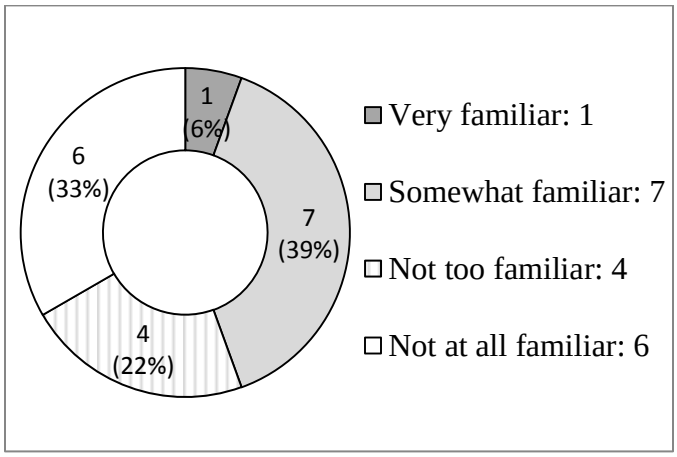

Figure 10: Familiarity with DalSpace

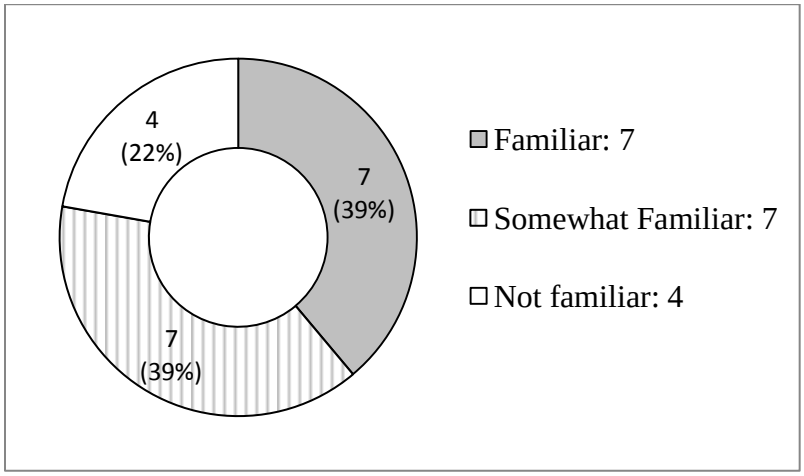

Figure 11: Familiarity with Open Access initiative

Next, given that DalSpace is Dalhousie's IR, responses about having materials deposited in it were collected. Table 4 shows that only 2 out of 18 had materials deposited and 10 that did not deposit anything. It is unclear, in the case of the 2 who deposited, if they self-archived their material or it was mediated.

Table 4

Deposited materials in DalSpace

Answer	**Number (%)**
Yes (research papers)	2 (11%)
No, did not deposit	10 (56%)
Do not know	6 (33%)
Total	18

Moreover, 16 respondents out of 17 (94%) indicated that they never used DalSpace to search for publications. The only respondent who used DalSpace for search rated the usage as "rarely".

If the university or funders were to make a policy mandating self-archiving, 11 (65%) indicated they will willingly comply, 4 (23%) will reluctantly comply and 2 (12%) will not as shown in Figure 12.

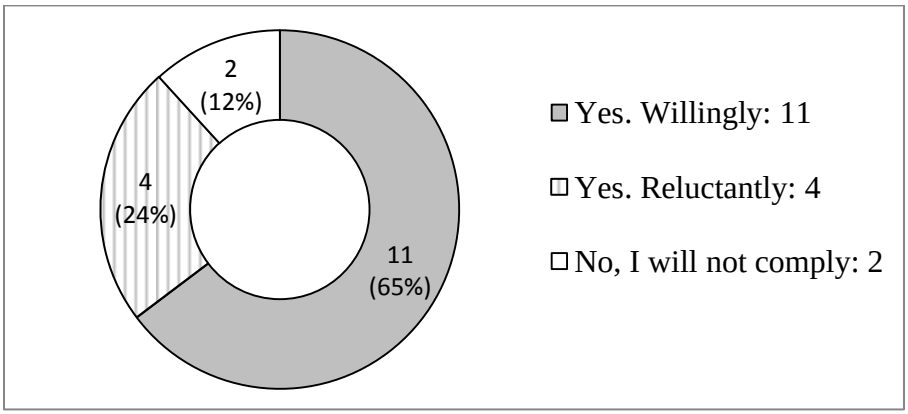

Figure 12: Willingness to comply with a university mandate policy

One of the two that said they would not comply answered the earlier question about compliance with university policy with “Strongly agree”. The other one justified the response by indicating that compliance would depend on the work and what the conditions are. Another respondent who indicated reluctant compliance also stated that it would depend on the copyright agreement condition. Furthermore, one commented that who makes the mandate policy is important, whether it was the university or funders (i.e. Canada-wide).

Another respondent added that the answer would be “I don’t know”, as appealing as the OA benefits seems to be, as much it affects the sustainability of the journals whom he/she would like to survive, it makes quality control difficult and shift the burden of cost mainly on the researcher which “will likewise taint the quality, accessibility and reliability of the research”. Another respondent added that even though the principles of OA are good, “scholars in my field do not get grants that are big enough to pay for Open Access publishing”.

One of the English department’s respondents indicated that due to their work in creative literature it is already difficult to get funders to acknowledge the work to be valid and “I am somewhat more reluctant to make such work available in an open environment. The fact is that it is at least as difficult to get creative work published; and that outside funders usually consider market availability (i.e. the work is sold) as a criteria for funding”.

Lastly, a respondent from Medicine did not see why is there a need for an IR to have already published papers when they are available in other sources such as: PubMed, Web of Science and ResearchGate. The respondent also added that the IR “might only be good for publishing theses and other unpublished material”.

Chapter 7: Discussion

Copyrights concerns and confusion about conditions of OA publishing are identified as a major barrier to self-archiving (Kim, 2011). The results show that while 24 (94%) of the respondents answered that they assigned their copyrights to their publishers, 3 of them then indicated that they granted the publisher an exclusive license for the first publication, which may suggest some confusion enforced later by the answers of 10 (45%) responses stating they did not know if their copyright agreement allowed self-archiving in IRs or not. Those who were not sure, when asked again if they needed their publisher's permission, answered they most likely needed it making a total of 11 (50%) of whom needs permission and leaving only 4 (18%) who stated they did not know. Morris (2009) showed that there is a mismatch between the authors' perception and wishes and the actual policies of the publishers. The authors underestimate what they are allowed to do with their submitted and the accepted articles for which the rights granted by the publishers tend to exceed the authors' wishes especially with regard to self-archiving. As for the published version, authors underestimated what they are allowed to do in all regards except for self-archiving, which they overestimated their rights to, which was not the publishers' policy. Morris suggests that this inaccurate understanding of self-archiving policies is due to the publisher failure to get the positive message about their policies, especially for the preprint versions, which exceed the authors' expectations. Morris also indicate that the confusion about self-archiving the published version is due to the widespread use of the counter-intuitive term 'post-print' by OA advocates to refer, not to the published version, but to the final draft, post-refereeing.

The questions that asked about the conditions and restrictions on self-archived material had opposing views but the majority did not favor having tight restrictions (i.e. registration,

material strictly for viewing and should be peer-reviewed) thus showing approval for OA principles and IR options. However, it is likely that the wording of the questions had some influence on the answers supporting the positive attitude. Furthermore, the results showed that 18 (72%) of the respondents had made materials OA before. An interesting observation is that 4 out of 7 (57%) of the respondents who did not make their materials OA before are from the Humanities fields. The sample size is not sufficient to make any assumptions about connection between self-archiving and discipline; however, it has been established in the literature that OA is moving slowly in the humanities. Suber (2005) outlined nine reasons for the slow progress of the humanities compared to the Science, Technology and Medicine (STM) fields and gave recommendations to overcome them. As the English and Classics respondents indicated, journal articles are not the primary literature in these fields but rather are reports on the history and interpretation of the main literature which is books. Other forms of output (such as music) are common in the humanities which will make the owners lose revenue if made available online for free. These concerns are understandable; however, it is still possible to provide OA excerpts and samples from these works with the metadata record in the IR to help other people find and sample them and thus get the benefit of OA.

Two respondents indicated that despite of their interest of getting their work to reach wider audience through OA, they were concerned about the burden of the cost of OA publishing which is on the author. One of them is considered to be familiar with OA initiative and the other as somewhat familiar. Although the comments confirm their familiarity with the OA, they are clearly referring to the golden model of OA (i.e. OA journals) rather than the green which is self-archiving.[1] However, some of the questions in the survey did not distinct between the two

[1] The terms (Gold and Green OA) were introduced in section 2.2.1.

models and referred to OA in general. Swan (2006) states that there is a lack of clear understanding of OA and its issues even when scholars consider themselves to be familiar with OA concept due to the widespread incorrect information and misuse of the terminologies related to it.

Keeping in mind that 16 out of 19 (84%) have sufficient access to research literature, it is understandable that they do not see the need for an IR as a destination to retrieve content as indicated by the Medicine respondent. The strength of an IR is not in making it a destination but rather lies in its interoperability with other services and search engines and thus making content easily discoverable by others. As the respondents are aware of OA resources and channels to retrieve research literature and show interest to get their content indexed in search engines, they do not seem to know that the IR is a way to get this benefit.

Definitely there is the issue of awareness of DalSpace's existence, 10 out of 18 did not know about it nor its purpose. The other 8 showed that knew about it and understood that it is the university's IR, however, only 2 had materials in it. A large percentage, 74% (14), of the respondents regarded the process of self-archiving as time consuming rather than 9 (47%) of those 14 who regarded it as difficult. Studies show that the process of depositing an article takes an average of 10 minutes to complete (Swan, 2006). This perception of the process being time consuming might be justified by the busy nature of the faculty work and their wish to not add to their workload as Foster and Gibbons indicated (2005). Therefore, another factor comes to play, Swan (2006) put it as: inertia, which can be solved simply by making self-archiving a requirement rather than voluntary. Respondents showed that they are willing to comply with a policy mandating self-archiving where 15 out of 17 stated they are willing to comply. Also, some of the faculty showed that they are willing to self-archive if it is integrated into the tenure and

promotion systems or for a financial reward as Ferreira et al. (2008) did for the University of Minho's IR.

Jantz and Wilson (2008) state that faculty lack of participation is due to not perceiving the value of an IR to their scholarly endeavor because of two factors: immaturity of the IR platform and absence of coherent articulation of how it can advance scholarship. Jantz and Wilson indicate that the IR platform immaturity is by not having enough content and services that support scholarly methods. Furthermore, The IR value should be well articulated and marketed to show its potential by first not relying on the term 'institutional repository' but by choosing a language that relates to faculty's research and scholarship rather than the institution. These two factors can be applied to DalSpace as well, there is the need to promote it and fully explain its potential to faculty and answer their concerns. Other services should be provided such as mediated deposits, usage statistics, collaboration environments and support to answer and clarify copyright concerns. Moreover, DalSpace administrators should work on getting it indexed in search engines such as Google Scholar, to enforce the value of the IR strengths and benefits. Choudhry (2008) adds data curation as an important service for the IR that is important to consider. Preserving research data in the IR will free the faculty from the burden of managing backups and will give the opportunity to other researchers to use and build on it. Bicknese (2003) also agrees that the IR should go beyond archiving scholarly output and should capture non-scholarly materials.

Table 5 summarizes the recommendations that should be made to improve faculty members' contribution to DalSpace.

Table 5

Recommendations to improve faculty members' contribution to DalSpace

Action	Pages
Raise awareness of: DalSpace existence and benefits; OA issues and copyrights conditions regarding self-archiving through presentations, workshops, websites or news in social media, while using a language that relate to the faculty interest regarding research impact and the wider readership.	29, 30, 32
Improve accessibility to DalSpace by linking it from departments' pages and myDal portal.	31
Provide help to clarify copyrights issues on DalSpace page rather than the library page.	29
Provide value-added services such as usage statistics to show that the article is read and downloaded.	24, 32
Enforce a policy mandating self-archiving in DalSpace, which is highly important to gain the fruit of raising awareness. The policy should take into account disciplinary differences especially the humanities fields.	32

Chapter 8: Conclusion

The findings suggests the need to raise the awareness of the IR existence and benefits it brings and clear confusion with copyright agreements conditions regarding depositing materials in the IR. As most faculty members have theoretically the same goals that the OA fulfill, it is important to communicate the full picture to them and fit the IR with their needs rather than the university's as the 'institutional' term refers to. Increasing the awareness should include making DalSpace more 'discoverable' as ALJohani's study (2013) highlighted, by linking it to each department webpage. Furthermore, the study shows that the surveyed faculty members are willing to comply with a policy mandating depositing in the IR if the copyright agreement allows it and the conditions for that policy does not interfere with publishing in other channels while keeping in mind disciplinary differences especially the Humanities fields. Leaving contribution as a voluntary matter would not be in the IR's advantage because faculty will not remember to use it until they need it. Lastly, a full plan and careful consideration of promotional language and other incentives such as integrating self-archiving in DalSpace into to tenure and promotion system or financial reward for contributing departments.

8.1. Reflections

The goal from using the questionnaire as the study instrument in this project was to reach the largest number of faculty as possible. It is hard to compare the effectiveness of the two strategies used for recruitment as the second was done toward the end of the semester which is a busy time for faculty members. Furthermore, there was not enough time to send reminders. If this study is to be redone, the recruitment would be individually by e-mails or by the invitation feature in

Opinio tool to keep track of who respond or not and would send reminders of the questionnaire after a period.

As for the 29 who did not complete the rest of the questionnaire, they stopped at the background set of questions which were required to be answered; this requirement to answer might be the reason why the questionnaire was not continued. It would be better if there was a note indicating that those fields are required and maybe limit the requirement to the department name as the most important field for analysis.

Lastly, interviews with some of the faculty members should be conducted to explore further on their scholarly practice to find out what features and services they need in the IR especially in relation to research data management as the library staff are working in this area and collaborative research services.

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Appendix A **Questionnaire**

Consent Form

Project Title: An Overview of Dalhousie University's Scholars' Practices

By proceeding with this survey you acknowledge that you have read the following and you are giving consent to participate in the study:

• This study aims to understand the current scholarly practice by Dalhousie University faculty to find their needs in an attempt to deliver suitable services.

• Any member of Dalhousie's faculties is welcome to participate in this survey.

• We will focus on the scholarly output, practice of self-archiving, motivation for research, copy right management and concerns that needs to be addressed. Furthermore, we want to know if there were previous experience with an institutional repository and evaluate if it meets the needs it is intended to and what kind of features and conditions might encourage you to publish online.

• The study will be a questionnaire questions covering these focus matters which will take about 15 minutes to be completed.

• The knowledge gained from this study will direct the efforts of Dalhousie library staff to meet in the middle with the faculty needs. The institutional repository holds great promise for researchers; by understanding their scholarly practice and needs and making the effort to meet those needs, they will gain the promised benefits that will contribute to their scholarship.

• There is minimal risk associated with this study that is not more than what is faced in everyday life.

• Data collected will be stored on Dalhousie secure password protected server and only the researchers will have access to it and they will make sure you remain anonymous.

• You may decline to answer any question and you may leave the survey at any time without any consequences.

We are happy to talk with you about any questions, comments or concerns you may have about your participation in this research study.

Zainab Abuabdallah, MACS, Faculty of Computer Science (zainab@cs.dal.ca)

By clicking the start button I acknowledge that I have read the explanation and agree to participate in this study. I fully realize that my participation is voluntary and that I am free to leave the study at any time without any consequences.

Start

Appendix A Questionnaire

A. About you

1. Department: [ ]

2. Title:

Professor

Associate Professor

Assistant Professor

Adjunct Professor

Instructor

Other, Please specify [ ]

3. Age: [ ]

4. Years working in research: [ ]

B. Scholarly Output

5. Approximate number of publications [ ]

6. Average publications per year [ ]

7. Do you assign your copyrights to the publishers to get published overall?

Yes, freely

Yes, reluctantly

No, they don't ask for copyrights assignment

No, I retain my copyrights

8. If you retain your copyrights, what do you do?

Grant the publisher an exclusive license for the first publication only

Provide your own author addendum for the publisher to agree to

Other, please specify: [ ]

9. Have you made your material freely accessible online before?

Yes, educational material

Yes, research material

Yes, educational and research materials

No

10. If you answered yes, where have you put them? (Check all that apply)

Personal web page

Department web page

Other, please specify:

Research group/lab page

Free disciplinary databases*

Institutional repository**

* **disciplinary databases:** data base that contains subject specific materials

** **Institutional repository:** a set of services offered by a university or institution to its community for the management, organization, accessibility and dissemination of the scholarly materials created by them.

11. Does your copyright agreement allow you to publish online in your institutional repository?

Yes

No

I don't know

C. Motivation for Research

12. Rate how important these factors for you:

	Very important						**Not important**
Communicating your findings to your peers	O	O	O	O	O	O	O
Advance your career	O	O	O	O	O	O	O
Gain funding	O	O	O	O	O	O	O
Personal prestige	O	O	O	O	O	O	O
Financial reward	O	O	O	O	O	O	O
Enthusiasm for subject field	O	O	O	O	O	O	O

13. Do you have other motivations to add?

Yes No

D. Online publishing

14. Indicate your opinion on the following sentences; all of the questions are about your work and materials publicly accessible online.

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know
1	I have to get permission from my publisher before making my work publicly accessible	O	O	O	O	O	O
2	I have to get my co-authors permission before making my work publicly accessible	O	O	O	O	O	O
3	Making my work publicly accessible online will reach wider audience	O	O	O	O	O	O
4	Making my work publicly accessible online will give my work larger impact	O	O	O	O	O	O
5	I will get more citations if my work was publicly accessible online	O	O	O	O	O	O
6	I will put my work publicly accessible online under some conditions and restrictions	O	O	O	O	O	O
7	The material should be strictly for viewing (no downloading)	O	O	O	O	O	O
8	The material format should not be changed (e.g. remain as a pdf file)	O	O	O	O	O	O
9	The material should be removed after certain period (e.g. 5 years)	O	O	O	O	O	O
10	Material should be available only through registration	O	O	O	O	O	O
11	I want metrics for usage tracking (reads, downloads, cited by)	O	O	O	O	O	O
12	Only materials that have undergone peer review should be archived in the institutional repository	O	O	O	O	O	O

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know
13	I have other types of materials I would like to archive (e.g. images, data, software)	O	O	O	O	O	O
14	If my conditions are met, I am willing to publish online	O	O	O	O	O	O
15	I am interested in getting my materials in a search engine results (e.g. Google Scholar)	O	O	O	O	O	O
16	I am interested in getting my materials on a digital libraries or catalogs (e.g. Worldcat)	O	O	O	O	O	O
17	Access to research literature is not a problem for me	O	O	O	O	O	O
18	Making my work publicly accessible is time consuming	O	O	O	O	O	O
19	I find the process of archiving my work online difficult (filling the information and meta data)	O	O	O	O	O	O
20	I am willing to publish my work online through somebody specialized in archiving	O	O	O	O	O	O
21	I will put my work online for public access if there is a reward for tenure and promotion	O	O	O	O	O	O
22	I will put my work online for public access if it is a University policy	O	O	O	O	O	O

E. Institutional Repository

Institutional repository: a set of services offered by a university or institution to its community for the management, organization, accessibility and dissemination of the scholarly materials created by them.

15. Do you know if there is an institutional repository in Dalhousie University?

Yes No

16. Are familiar with DalSpace?

Very familiar

Not too familiar

Somewhat familiar

Not at all familiar

17. Are familiar with the Open access initiative?

Yes

Heard of it but I don't know details

No

18. DalSpace is Dalhousie's institutional repository. Do you have any material in it? If yes specify what kind of material.

Research papers

Image, video or software

Thesis

No, I did not deposit anything

Other material, please specify:

I don't know

19. Did you use DalSpace to search for other authors publications?

Yes

No

20. If you answered yes, rate how often do you use it for search:

	1	2	3	4	5	
Never	○	○	○	○	○	Always

21. If the university or funders make a policy requiring you to make your work publicly accessible online, would you comply with that policy?

Yes, willingly
Yes, reluctantly
No, I will not comply

22. Do you have any comment or more information to provide?

Thank you for completing the survey!

23. Would you like to let me contact you for a follow up interview?

It will help us better understand the current scholarly needs of the faculty to improve the services and options offered. Any help you can provide is highly appreciated. Please provide your e-mail address if you would like to participate:

The researcher will contact you to clarify what will be done and give you the chance to read the transcript. The interview would take 30 minutes to an hour maximum. You have to the option to withdraw at any given time without any consequences.

Appendix B

Questionnaire Responses - Complete

ID	Q1 Department	Q2 Rank	Q3 Age	Q4 Research years	Q5 Publications	Q6 Avg. Publications
1	political science	Associate Professor	54	33	22	2
2	Physics and Atmospheric Science	Associate Professor	42	19	35	2
3	SOSA	Assistant Professor	39	14	15	1
4	Philosophy	Professor	57	30	27	1
5	anon	Assistant Professor	anon	7	40	5
6	Earth Sciences	Professor	54	32	50	2
7	English	Associate Professor	39	14	10	3
8	Classics	Professor	69	50	200	4
9	Clinical Sciences, Faculty of Dentistry	Associate Professor	52	n/a	2	n/a
10	Mechanical Engineering	Associate Professor	45	22	25	2
11	FHP	Professor	60	30	100	3
12	Physiology and Biophysics	Professor	57	30	50	3
13	English	Associate Professor	57	19		1
14	English	Other: limited term	55	5	5	1
15	Medicine	Associate Professor	45	15	50	3
16	Theatre	Assistant Professor	39	6	4	1
17	Music	Assistant Professor	38	7	8	2
18	International Development Studies	Associate Professor	35	6	10	3
19	School for Resource and Environmental Studies	Professor	60	35	300	15
20	Information Management	Assistant Professor	31	10	40	6
21	xxx	Professor	NA	NA	50	3
22	School of Public Administration	Associate Professor	40	20	8	1
23	History	Professor	45	25	20	2
24	Business	Assistant Professor	53	7	35	5
25	Computer Science (Faculty of)	Professor	57	28	273	9.8

Appendix B

Questionnaire Responses - Complete

ID	Q7Copyright assignment	Q8 In case of retaining	Question9 OA materials?	Q10 PersonPg	Q10 DeptPg	Q10 groupPg	Q10 DDB	Q10 IR	Q10 Other
1	Yes. reluct		Yes. research	0	1	0	0	1	1academic linkd in facebook
2	Yes. freely	Exclusive 1st publication	Yes. research	0	0	0	1	0	0
3	Yes. reluct	Other:	Yes. research	1	1	0	0	0	0
4	Yes. freely	Other: n/a	Yes. research	0	1	1	1	1	0
5	Yes. freely		Yes. educational & research	1	0	0	0	0	0
6	Yes. reluct		Yes. research	0	0	0	1	0	0
7	Yes. freely		No	0	0	0	0	0	0
8	Yes. reluct	Other: I publish everything on my own website	Yes. educational & research	0	1	0	0	1	0
9	Yes. freely		No	0	0	0	0	0	0
10	Yes. freely		Yes. educational	1	0	1	0	0	0
11	Yes. reluct		Yes. educational	0	0	1	1	0	0
12	Yes. freely		Yes. research	0	0	1	0	0	0
13	Yes. freely		Yes. educational	1	0	0	0	0	0
14	No. retain	Exclusive 1st publication	Yes. educational & research	1	1	0	0	1	0
15	Yes. freely		Yes. educational & research	0	0	0	1	1	0
16	Yes. freely		No	0	0	0	0	0	0
17	Yes. freely		No	0	0	0	0	0	0
18	Yes. reluct		Yes. research	1	0	0	0	0	0
19	Yes. freely		Yes. research	0	0	1	0	0	0
20	Yes. reluct	Exclusive 1st publication	Yes. educational & research	1	0	0	0	0	0
21	Yes. reluct		No	0	0	0	0	0	0
22	Yes. reluct		Yes. educational & research	1	0	1	0	0	0
23	Yes. reluct		No	0	0	0	0	0	0
24	Yes. freely		No	0	0	0	0	0	0
25	Yes. freely	Exclusive 1st publication	Yes. educational & research	1	1	1	0	0	0

reluct: reluctantly, PersonPg: Personal page, groupPg: research group/lab page, DDB: Disciplinary database, IR: institutional repository

Appendix B

Questionnaire Responses - Complete

ID	Q11 Allowed to deposit in IR	Q12COMM	Q12CAR	Q12Fund	Q12FincRwrd	Q12Prstg	Q12Enthu
1	I don't know	1	4	4	4	2	1
2	Yes	1	3	1	4	6	1
3	I don't know	1	1	1	6	3	1
4	Yes	1	2	4	6	3	1
5	No	1	1	1	6	6	3
6	Yes	1	1	1	6	6	1
7	I don't know	1	1	3	2	2	1
8	I don't know	6	6	6	6	6	1
9		1	3	5	3	5	2
10	I don't know	2	2	2	5	5	2
11	Yes	1	1	1	2	2	1
12	I don't know	1	1	1	1	3	1
13		1	3	6	6	6	1
14	Yes	1	1	1	5	1	1
15	Yes	1	1	1	6	1	1
16	I don't know	2	2	3	6	3	1
17	No	1	1	1	2	1	2
18	No	1	1	1	4	1	1
19	I don't know	1	3	1	3	3	1
20	Yes	1	1	1	3	4	1
21		1	1	1	1	1	1
22	I don't know	1	2	6	6	1	1
23	No	1	1	1	3	3	1
24	No	3	1	2	1	1	1
25	I don't know	1	1	1	6	1	1

COMM: Communicating findings to peer, CAR: advance career, Fund: gain funding, fincRwrd: financial reward, Prstg: personal prestige, Enthu: enthusiasm for subject field.

Appendix B

Questionnaire Responses - Complete

ID	Other motivations
1	impact policy
4	Figure out the truth, solve world problems.
8	The interests of my Department. I publish primarily to advance its prestige.
12	Curiosity about the unknown. Discovery of the truth. Creativeness.
17	I aim for excellence at an international level.
18	Using scholarly research to achieve political change
19	Excitement to engage with both theoretical and practical uncertainties.
22	Gain funding - this is a facilitator of research, not a motivation. I don't do research in order to gain funding, I seek funding in order to do research. Financial reward - what could you mean by this?

Appendix B

Questionnaire Responses - Complete

Rating: 1 strongly agree, 2 agree, 3 neutral, 4 disagree, 5 strongly disagree, 6 I don't know

ID	Q14-1	Q14-2	Q14-3	Q14-4	Q14-6	Q14-7	Q14-8	Q14-9	Q14-10	Q14-11	Q14-12	Q14-13	Q14-14	Q14-15	Q14-16
1	6	6	1	1	6	5	1	5	5	5	4	2	1	1	4
2	4	4	3	6	2	4	1	4	3	2	4	4	2	2	1
3	4	3	1	1	6	4		5	4	3	4	3	2	2	6
4	1	1	1	1	1	5	2	5	5	2	5	5	1	2	6
5	2	3	2	2	2	4	2	4	4	4	4	2	4	2	2
6	1	6	2	1	2	2	1	5	2	3	1	3	2	1	1
7	2	4	2	2	2	5	3	4	6	2	2	4	6	2	2
8	6	6	1	1	5	5	5	5	5	5	5	5	1	1	1
9															
10	2	4	2	2	3	4	2	4	4	2	3	4	2	4	4
11	5	1	1	1	1	1	1	6	6	1	6	1	1	1	1
12	2	2	1	2	2	5	1	4	5	3	3	5	2	2	6
13	1	1	1	1	2	4									
14	5	3	3	3	3	3	1	3	3	1	3	3	3	2	3
15	1	1	1	1	1	3	1	2	2	2	1	3	1	2	2
16	1	1	2	6	2	3	3	2	3	1					
17															
18	4	3	1	1	2	5	5	5	5	5		5		1	1
19	6	2	2	2	2	5	1	5	5	4	5	2	2	2	2
20	5	2	1	1	5	5	5	5	5	1	4	2	1	1	1
21															
22	6	6	6												
23	2	2	2	3	2	3	2	4	4	3	1	2	2	2	2
24	2	2	4	4	2	4	1	5	4	1	1	4	2	1	3
25	4	4	1	1	4	4	2	4	4	2	4	2	2	1	1

Appendix B

Questionnaire Responses - Complete

ID	Q14 - 19	Q14 - 20	Q14 - 21	Q14 - 22	Q15 Know IR is in Dal	Q16 Familiar with DalSpace	Q17 Familiar with OA	Q18 Rsrch Ppr	Q18 Thss	Q18 Img	Q18 Data	Q18 No	Q18 duno	Q18 Other
1	1	1	1	1	No	Not at all familiar	Heard of	0	0	0	0	0	1	0
2	3	2	2	2	No	Not at all familiar	No	0	0	0	0	1	0	0
3	3	3	6	3	Yes	Somewhat	Heard of	0	0	0	0	0	1	0
4	5	6	3	3	Yes	Somewhat	Heard of	1	0	0	0	0	0	0
5	1	3	5	3	Yes	Somewhat	No	0	0	0	0	1	0	0
6	3	3	5	3	No	Not too familiar	Yes	0	0	0	0	1	0	0
7	6	3	2	6	No	Not at all familiar	Yes	0	0	0	0	1	0	0
8	5	6	5	5				0	0	0	0	0	0	0
9														
10	4	2	4	2	No	Not too familiar	Yes	0	0	0	0	1	0	0
11	1	1	1	1	No	Very familiar	No	0	0	0	0	0	1	0
12	5	6	5	3	No	Not at all familiar	Heard of	0	0	0	0	0	1	0
13														
14	2	3	3	3	No	Not too familiar	Heard of	0	0	0	0	1	0	0
15	2	1	1	1	Yes	Somewhat	Yes	1	0	0	0	0	0	0
16														
17														
18	2	3	3	3	No	Not at all familiar	No	0	0	0	0	0	1	0
19	6	2	3	2	Yes	Somewhat	Yes	0	0	0	0	1	0	0
20	5	1	1	1	Yes	Somewhat	Yes	0	0	0	0	0	1	0
21														
22					Yes	Not too familiar	Heard of	0	0	0	0	1	0	0
23	2	2	2	3				0	0	0	0	0	0	0
24	2	2	1	2	No	Not at all familiar	Heard of	0	0	0	0	1	0	0
25	2	2	4	2	Yes	Somewhat	Yes	0	0	0	0	1	0	0

Rsrch Ppr: Research Paper, Thss: Thesis, Img: Image, Video or software, No: No deposited materials, duno: Don’t know

ID	Q19 Searched in DalSpace	Q20 How often	Q21 Willing to comply	Q22 Comments
1	No		Yes. willingly	How does DalSpace operate with publishers?
2	No		Yes. willingly	
3	Yes	2 (Rarely)	No. I will not comply	For Q21 - it all depends what kind of work and what the conditions are. I need to find out more about it. Also, funding is extremely important here - scholars in my field do not get grants that are big enough to pay for Open Access publishing, so we must be very wary of it, even if the principles are good.
4	No		Yes. willingly	
5	No		Yes. reluctantly	depending on copyright from initial publication, my willingness or not to comply with a policy could be moot
6			Yes. reluctantly	
7	No			My answer to 21 would be 'I don't know' - it will depend upon a whole variety of issues. In theory, I am interested in having my work reach a wide audience, so open access or other kinds of publicly accessible online availability seems good. In practice, there are a whole slew of issues which come into play: 1) it makes sustainability very hard for publishers and journals, many of whom I would like to survive; 2) it makes control, accountability and reliability difficult - see recent studies on the 'peer review' process of open access journals 3) it tends to shift the burden of cost to the researcher, which seems very backwards and will likewise taint the quality, accessibility and reliability of the research.
8				
9				
10	No		Yes. willingly	

11	No		No. I will not comply	
12	No		Yes. willingly	I am not sure why there would need to be a university repository. All papers I am interested in are available in pub med or web of science. There are additional sources of research data, e.g. ResearchGate that are useful for finding information. University internal source might be good for publishing thesis and other unpublished material, but there is no point in placing already published papers there.
13				
14	No		Yes. willingly	My own situation is a bit different from many research scholars, in that I engage in creative research, which essentially means creative works of literature (novels, poems, plays). Two things are difficult here: one is the reluctance of the gatekeepers to acknowledge creative research work as valid; the second is I am somewhat more reluctant to make such work available in an open environment. The fact is that it is at least as difficult to get creative work published; and that outside funders usually consider market availability (i.e. the work is sold) as a criteria for funding.
15	No		Yes. willingly	
16				
17				
18	No		Yes. willingly	
19	No		Yes. willingly	
20	No	1	Yes. willingly	
21				
22	No		Yes. reluctantly	The previous page has FAR TOO MANY questions. I did not read them, they are a turn-off. It would really make a big difference, whether the funder or the university made that policy, as it would be Canada wide, or university wide.
23				
24	No		Yes. reluctantly	
25	No		Yes. willingly	

Appendix B

Questionnaire Responses - Incomplete

ID	Q1 Department	Q2 Rank	Q3 Age	Q4 Years in research	Q7 Copyright assignment
26	economics	Assistant Professor	35	5	
27		Assistant Professor	34	5	
28	Bioethics	Associate Professor	48	?	
29	SOSA	Assistant Professor	39	14	
30	Pharmacy	Associate Professor	43	20	
31		Professor			
32	English	Professor	67	42	
33	Dental Clinical Services	Professor	58	27	
34	Civil Engineering	Professor	55+	20+	
35		Other. please specify			
36	International DEvelopment Studies	Assistant Professor	47	9	
37	History	Professor	47	20	
38	School of Public Administration	Associate Professor	39	20	Yes. freely
39	Law	Professor	40	13	
40	Environmental Science	Professor	41	14	
41	Dentistry	Associate Professor	35	5	
42	French	Assistant Professor	35	8	
43	arch	Associate Professor	48	25	