Certificate of Originality

This is to certify that I am responsible for the work submitted in this dissertation, that the original work is my own except as specified in acknowledgements, footnotes or references, and that neither the dissertation or the original work contained therein has been submitted to this or any other institution for a degree.

Signed _____

Date _____

The Effects of Open Access Mandates on Institutional Repositories in the UK and Germany

by

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Abstract

Purpose

This research project explores the effects of institutional open access mandates on institutional repositories in Higher Education Institutions in the UK and Germany. Therefore, it analyses the experiences, opinions, and expectations of institutional repository managers from both countries.

Methodology

A thorough literature review and a questionnaire-based survey were conducted to gain background information regarding open access publishing, institutional repositories, and institutional open access mandates. Semi-structured follow-up interviews provide an in-depth insight into the views of institutional repository managers regarding the effects of institutional open access mandates. The results are presented thematically.

Findings

There is evidence that institutional mandates do have effects on institutional repositories in different ways, e.g. on content deposited and service provision. The effects vary according to the characteristics of repositories and the approach taken by institutions. The research results also indicate that the experiences of institutions with a mandate and the expectations of institutions without one are almost identical across both the UK and Germany, although the developmental context of institutional repositories and institutional mandates in these two countries are very different.

Impact

The findings of the dissertation are of interest for Higher Education Institutions considering the implementation of an institutional open access mandate.

Research limitations

The research was limited in the comparative analysis of the experiences of institutional repository managers as there are almost no mandates implemented in Germany. The limited time did not allow to follow-up further questions after the interviews were transcribed and analysed. A study of larger scale, for example on European level, should be interesting.

Value

The value of this dissertation is the exploration of the effects of institutional open access mandates on institutional repository services, a neglected field within the vast research about open access publishing and mandates so far.

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Acronyms and Terms Used

CDP	Cultural Data Project
CRIS	Current Research Information System
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation)
DINI	Deutsche Initiative für Netzwerkinformation e.V. (German Initiative for Network Information)
EThOS	Electronic Theses Online Service
HEI	Higher Education Institution
IR	Institutional Repository
JISC	Joint Information Systems Committee
OA	Open Access
OpenDOAR	The Directory of Open Access Repositories
OSI	Open Society Institute
PEER	Publishing and the Ecology of European Research Project
RCUK	Research Councils UK
REF	Research Excellence Framework 2014
ROAR	Registry of Open Access Repositories
ROARMAP	Registry of Open Access Repositories Mandatory Archiving Policies
SOAN	SPARC Open Access Newsletter
SOAP	Study of Open Access Publishing
SPARC	Scholarly Publishing and Academic Resources Coalition
SPD	Sozialdemokratische Partei Deutschland (Social Democrat Party)
UK	United Kingdom
UKCoRR	United Kingdom Council of Research Repositories

Chapter 1: Introduction

This chapter introduces the research project, outlining background and importance of this research as well as the aims and objectives. Additionally, an overview of the structure of the dissertation is provided.

1.1 Overview

For more than the last two decades open access (OA) is a permanent topic of interest in the academic world, especially the development of OA institutional repositories (IR) like the repositories established at university libraries. Issues about their function, acceptance by academics, as well as their usefulness are frequently discussed. There are a few surveys examining the attitude of academics towards OA publishing and OA mandates but only rare data regarding to the impact of such mandates on IRs and their services. Thus, it was vague what institutions have to expect and to consider when thinking about the implementation of such a mandate. Therefore, the researcher collected up-to-date information about existing IRs at Higher Education Institutions (HEIs) in the United Kingdom (UK) and Germany as well as information about the experiences of IR managers who have already implemented an institutional OA mandate and the expected implications of such mandates by IR managers without one. The selection of the countries based on the fact that they are the ones with the most IRs in Europe according to the Registry of Open Access Repositories (ROAR; as of February 2011).[1] They are also in the "more advanced stage" in their development of IRs.[2] As there are only rare researches about the perception of IR managers towards OA mandates and therefore no spread experiences about the impact of such mandates on the daily work of the IR this research explored a part of the OA publishing field which was neglected so far. The findings give indications of what to expect and what has to be considered in the process of adopting an institutional OA mandate at HEIs in the UK and Germany. It also examined the differences and commonalities of the two countries. The results can be useful for all IR managers at HEIs who have not yet implemented an OA mandate but will do so in the future.

[1] *Registry of Open Access Repositories (ROAR)*. <http://roar.eprints.org/>, [n.d.], [accessed 10.02.11].
[2] Digital Repository Infrastructure for European Research (DRIVER). *Research repositories in Europe: the 2008 DRIVER inventory study* [online] <http://www.driver-support.eu/documents/Research_Repositories_in_Europe__the_2008_DRIVER_Inventory_Study.pdf>, p. 15, [accessed 07.02.11].

1.2 Research Questions

Derived from the context given above the following research questions were aimed to examine.

- To what extent have public HEIs in the UK and Germany implemented institutional OA mandates in relation to their IR?
- What are the effects and implications of institutional OA mandates on IRs in terms of services delivery and usage?
- What are the differences and commonalities between the UK and Germany regarding the IR landscape of HEIs?

1.3 Aims and Objectives

To answer the research questions the following aims and objectives were developed:

Aim 1

- To collect a systematic overview of characteristical data of IRs at HEIs in the UK and Germany and identify existing institutional OA mandates.

Objectives

- Identify appropriate institutions that have an IR as possible participants for online questionnaires through trustworthy lists provided on the internet.[3] [4]
- Collect generic data like existence of repository, document numbers, existence of institutional OA mandate of the IRs through online questionnaires.

Aim 2

- Survey the experiences and perceptions of IR managers towards the effects of institutional OA mandates as well as the expected implications regarding their daily work of IR managers not having a mandate.

[3] Higher Education Funding Council for England (HEFCE). *Higher education institutions funded by the council*. <http://www.hefce.ac.uk/unicoll/HE/>, 2010, [accessed 03.06.11].
[4] Fernstudium. *Universitäten in Deutschland*. <http://www.fernhochschule.net/universitaeten-deutschland.php>, [n.d.], [accessed 03.06.11].

Objectives

- Gather information about the effects and expected implications of institutional OA mandates as described above through semi-structured interviews with IR managers both from institutions with an existing mandate and from institutions without one to gain insight into the effects of institutional OA mandates on repositories and their services.

  This information will be collected in both countries, the UK as well as Germany, to gain data for a comparative analysis.

Aim 3

- On the basis of comparative analysis identify the differences and commonalities between the UK and Germany regarding the IR landscape of HEIs.

Objectives

- Compare the data of both countries collected by the online questionnaires and interviews and analyse them regarding their development of repositories.

1.4 Structure

The dissertation is divided into six chapters. Chapter one gives a short overview of the context of the research and an explanation as to why it is thought to be important to conduct this research. It also presents the research questions and outlines the aims and objectives of the dissertation. Chapter two describes and explains the methods used for data collection including problems that emerged and limitations of the research methods. In chapter three a thorough literature review provides background information which is needed to put the results of the survey and the following discussion in context. The interview and online questionnaire results are presented thematically in chapter four supported by graphs and quotations. The discussion of the results can be found in chapter five. Chapter six, the final chapter, only followed by the bibliography and appendices, contains a conclusion as well as recommendations.

Chapter 2: Literature Review

This chapter provides a thorough literature review regarding the topics open access publishing, institutional repositories, and mandates as background information to this research project.

2.1 Definition Open Access

The OA movement has its beginning with a meeting of the Open Society Institute (OSI) in December 2001 in Budapest, Hungary. The aim of this meeting was to support and to accelerate the development of freely accessible academic work results on the internet. The so-called Budapest Open Access Initiative has so far been signed by 6,108 participants (as of September 2011).[5] The next meeting on OA publishing was held in Bethesda, Maryland, United States 2003. During this meeting a definition of OA was proclaimed. The definition includes the 'rights to access and use' and the submission of the complete work in a repository which also guarantees a long-term archiving.[6] Only a few months later in October 2003 another conference was held in Berlin, Germany. It also published a proclamation on behalf of the support of OA with the title "Berlin Declaration on Open Access to Knowledge in the Science and Humanities", better known as the "Berlin Declaration". It has currently 312 signatories from all over the world (as of September 2011).[7] The Berlin Declaration extended the definition of OA publications and principles of Bethesda by the need of technical standards for repositories.[8] Other definitions emphasise that at least and foremost publicly-funded research should be freely available.[9] In summarisation OA is the free and immediate access to scholarly data, preferable as full-text via the internet including a guarantee for long-term archiving. The immediate access without any delay like embargoes was also emphasised by

[5] *Budapest Open Access Initiative*. <http://www.soros.org/openaccess/view.cfm>, [n.d.], [accessed 07.09.11].
[6] *Bethesda Statement on Open Access Publishing*. <http://www.earlham.edu/~peters/fos/bethesda.htm>, [n.d.], [accessed 10.02.11].
[7] *Open Access at the Max Planck Society*. <http://oa.mpg.de/lang/en-uk/berlin-prozess/signatoren/>, [n.d.], [accessed 07.09.11].
[8] *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* [online] <http://www.zim.mpg.de/openaccess-berlin/berlin_declaration.pdf>, 22.10.03, p. 2, [accessed 10.02.11].
[9] Jones, C. *Institutional repositories: content and culture in an open access environment*, 2007, p. 189.

the Scholarly Publishing and Academic Resources Coalition (SPARC) in their "SPARC Europe statement on OA for public hearing EU"[10] 2011.

2.2 Definition (Institutional) Repository

To fully understand the background of this research the definition of IRs has to be explored. Raym Crow, a member of SPARC defined IRs in a SPARC position paper as follows:

> *'… digital collections capturing and presenting the intellectual output of a single or multi-university community …'*[11]

With this definition he is going far beyond the definition of repositories in dictionaries, also dependent on his emphasis on *institutional* repositories. The Oxford Dictionaries only have an entry for repositories not for institutional repositories. The definition includes the following characteristics:

- a place of storage.
- a place where a resource is found in a significant quantity.
- a place where stored information with a particular quality can be found.[12]

Interesting here are the raised issues of quantity and quality which are elementary for IRs to achieve their aims. Institutional repositories can only be successful if they have a certain quantity of documents and a certain level of quality as they have to be full and able to spread their content easily, means to be found easily via search engines like Google and Google Scholar, to be effective and relevant. The reason for this dependency is that academics will only be interested in using such IRs and also be willing to publish their work in them if they are convinced that it contributes to academic knowledge and communication. Some other definitions emphasise the

[10] Scholarly Publishing and Academic Resources Coalition. *SPARC Europe statement on OA for public hearing EU*. <http://www.sparceurope.org/resources/sparc-eu-materials/written-contributions/SPARC%20Europe%20Statement%20on%20Open%20Access%20Luxembourg%2030%20May%202011_FINAL.pdf/view>, 2011, p. 1, [accessed 03.09.11].
[11] Crow, R. *The case for institutional repositories: a SPARC position paper* [online] <http://www.arl.org/sparc/bm~doc/ir_final_release_102-2.pdf>, 2002, p. 4, [accessed 10.02.11].
[12] *Oxford Dictionaries*. <http://oxforddictionaries.com/view/entry/m_en_gb0702100#m_en_gb0702100>, 2010, [accessed 10.02.11].

availability of full-text documents in OA IRs.[13] In conclusion, the ideal IR stores and preserves academic output in a certain quantity and quality, preferable as full-text. Nowadays, IRs are almost always thought of OA IRs, although this is not one of their original characteristics.[14] Otherwise the reason for this close connection to OA is that IRs are able to support OA and provide OA documents easily.

2.3 Types of Repositories

Examples for types of repositories are so-called subject-based repositories and IRs as they are often found at HEIs mainly located in their libraries. Subject-based repositories collect documents from a certain field of interest.[15] The first subject-based repository was already founded 1991 by Paul Gingsparg for the field of high energy physics. This repository is now well-known under the name arXiv.[16] In opposition, IRs collect data from their institution and can therefore be interdisciplinary. The collected data of IRs are preferable full-text documents but can also be the metadata of a published document. For both types of repositories, subject-based and institutional, exist different possibilities of OA publishing.

2.4 Current Ways of OA Publishing

In consideration of an existing copyright that is far behind the reality of digital developments in the publishing field and the attitude of publishers towards OA at the moment there are two common ways of OA publishing; the so-called green way and the gold way. The green way is the publication of a document at a publisher and at

[13] Pinfield, S. A mandate to self archive? The role of open access institutional repositories. *Serials* [online], 2005, 18(1), 3. <http://serials.uksg.org/openurl.asp?genre=article&id=doi:10.1629/1830>, [accessed 03.02.11].
[14] Albanese, A. R. Thinking beyond the box. *Library Journal* [online], 2009, 134(4), 28. <http://web.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=e990f218-7cd4-4ea0-ab5a-597813cac9f1%40sessionmgr115&vid=2&hid=110>, [accessed 05.09.11].
[15] Creaser, C. Open access to research outputs - institutional policies and researchers' views: results from two complementary surveys. *New Review of Academic Librarianship* [online], 2010, 16(1), 12. <http://dx.doi.org/10.1080/13614530903162854>, [accessed 05.09.11].
[16] Simpson, P., Hey, J. Repositories for research: Southampton's evolving role in the knowledge cycle. *Program: electronic library and information systems* [online], 2006, 40(3), 224. <http://dx.doi.org/10.1108/00330330610681303>, [accessed 03.02.11].

the same time or with some delay, a so-called embargo, in a repository.[17] The length of these embargoes and the attitude of publishers towards OA in general vary widely and complicate the process for authors.[18] Information about publishers' policies regarding OA publishing can be found on the homepage of SHERPA/RoMEO (http://www.sherpa.ac.uk/romeo/). The second frequently used way of OA publishing is the publication in an OA journal; the gold way.[19] However, in this case the costs for the journal production have to be obtained through other sources as selling the journal. Often authors, institutions, and/or funders have to meet the costs. Meeting the costs for OA publications is still a great problem. Both ways of OA publishing have advantages and disadvantages. Within the gold way publishers still have the power to charge as much as they think is necessary to achieve their profit margin[20] and therefore it could be even more expensive than the subscription prices for the non-OA journals.[21] The green way can include an embargo and therefore the immediate access is not given for the embargoed time unless an institution can afford the subscription price for the journal or another version of the journal article, for example, a pre-print version is available. A third way, to let the reader pay per view is also restricting access.[22] In literature the green way seems to be supported most.

2.5 Reasons for OA Publishing and OA IRs

There is an increasing common sense that academic knowledge and research results, especially the results of publicly-funded research, should be publicly accessible without restrictions.[23] Fast dissemination is the main advantage of OA publishing, although some think that OA publishing do not have a significant

[17] Open access. *Open-Access Strategien*. <http://open-access.net/de/allgemeines/was_bedeutet_open_access/open_access_strategien/#c400>, 2010, [accessed 08.09.11].
[18] Shepherd, P. T. PEER: A European project to gather evidence on the effects of widespread open access publishing. *Against the Grain* [online], 2008, 20(5), 86. <http://www.peerproject.eu/fileadmin/media/ppt_about_peer/v20-5_Shepherd.pdf>, [accessed 03.09.11].
[19] Open access, ref. 17.
[20] Poynder, R. The open access interviews: Wellcome Trust's Robert Kiley . *Open and shut? [Blog]*, 26.08.11. <http://poynder.blogspot.com/2011/08/open-access-interviews-wellcome-trusts.html>, [accessed 03.09.11].
[21] Suber, P. UK government position paper on open access. *SPARC-OA-Forum*, 30.03.11, 13:34:56 GMT.
[22] *Ibid*.
[23] Jones, ref. 9, p. 189.

influence on the dissemination of research results.[24] This opinion is disproved as current surveys show that OA publications are faster disseminated[25] and have significant impact on citation rates.[26] This development also serves the academics in their wish to be acknowledged as they usually do not directly earn any money with publishing research results. This is also valid for the traditional way of publishing in a publisher's print journal. Dissemination and a contribution to human knowledge as well as the before mentioned recognition, also including some reward in funding new researches and job promotion, are the reasons for academics to publish anything at all.[27] [28] Considering all this information there is still the question to be answered why publishing in an *institutional* repository. To answer this question it is necessary to explain what the function of an IR is.

> '*… an institutional repository is a recognition that the intellectual life and scholarship of our universities will be increasingly be represented, documented, and shared in digital form, …*'[29]

This quotation supports the opinion of many institutions which are convinced that IRs are a powerful instrument for the dissemination of research output and hence can improve their profile.[30] Visibility is also one of the reasons to launch an IR in the first place.[31] In addition, IRs have the advantage of the existing infrastructure, e.g. technique and resources to do so.[32] This is especially the case for IRs at

[24] Esposito, J. J. Open access 2.0: access to scholarly publications moves to a new phase. *Journal of Electronic Publishing* [online], 2008, 11(2). <http://quod.lib.umich.edu/cgi/t/text/text-idx?c=jep;view=text;rgn=main;idno=3336451.0011.203>, [accessed 03.02.11].
[25] Richard, J., Andrew, Th. and MacColl, J. *The institutional repository*, 2006, p. 26.
[26] Gargouri, Y. *et al.* Self-selected or mandated, open access increases citation impact for higher quality research. *PLOS ONE* [online], 2010, 5(10), 20. <http://eprints.ecs.soton.ac.uk/18493/58/MandateOA_PLOSpostprint.pdf>, [accessed 03.09.11].
[27] Richard, ref. 25, p. 26.
[28] Creaser, C. *et al.* Authors' awareness and attitudes toward open access repositories. *New Review of Academic Librarianship* [online], 2010, 16(1), 155. <http://dx.doi.org/10.1080/13614533.2010.518851>, [accessed 05.09.11].
[29] Jacobs, N., ed. *Open access: key strategic, technical and economic aspects*, 2006, p. 133.
[30] Richard, ref. 25, p. 17.
[31] Swan, A. and Carr, L. Institutions, their repositories and the web. *Serials Review* [online], 2008, 34(1), 31. <http://www.sciencedirect.com/science?_ob=MImg&_imagekey=B6W63-4RR8323-1-1&_cdi=6587&_user=122878&_pii=S0098791307001542&_origin=gateway&_coverDate=03%2F31%2F2008&_sk=999659998&view=c&wchp=dGLbVzW-zSkWB&md5=ef3137de97653a612f39bb0b6457d8af&ie=/sdarticle.pdf>, [accessed 04.02.11].
[32] Pinfield, ref. 13, p. 31.

universities which are very often located in university libraries.[33] Therefore, IRs have knowledge of their institution's organisation. Additionally, already existing infrastructure can be used to improve the management of the institutional information which can be supportive for the Research Excellence Framework (REF) 2014 by using, for example an OA mandate to collect all documents of the institution. Even though, OA IRs are also established as a response to the so-call journal crisis and to reduce libraries' spending on journals, they do not have an immediate or great effect on the amount of money spend on journals but can increase the availability of additional materials.[34] In addition, many argue that to launch an OA IR itself will not achieve a higher availability of materials but that they have to be promoted and supported by additional valuable services and institutional OA mandates.[35]

2.6 Researchers' Perceptions of OA Publishing

The publication of their research results in high impact journals is important for researchers to progress in their career.[36] Thereby, the publication in a high impact journal confirms that the research meets high quality standards and that this quality was proved by other researchers through a peer-review process.[37] The main advantages of OA publishing for researchers according to a survey are the free accessibility for a broader readership, faster dissemination, and an increased citation rate.[38] On the other side, researchers are concerned about low impact and prestige of OA journals and publications,[39] copyright implications and the deposit of different versions of the publication as well as a reduced quality.[40] Journal articles which are published OA are often thought of not being peer-reviewed documents

[33] Creaser, ref. 15, p. 12.
[34] *Ibid*, p. 15.
[35] Albanese, ref. 14, pp. 26-27.
[36] Harnad, S. *et al.* The access/impact problem and the green and gold roads to open access: an update. *Serials Review* [online], 2004, 34, 36. <http://eprints.ecs.soton.ac.uk/15852/2/serev-revised.pdf>, [accessed 03.09.11].
[37] Harnad, S. Open access is a research community matter, not a publishing community matter. *Lifelong Learning in Europe* [online], 2011, in press. <http://eprints.ecs.soton.ac.uk/22403/1/harnad-LLinE-1.pdf>, [accessed 03.09.11].
[38] Swan, A. and Brown, S. Authors and open access publishing. *Learned Publishing* [online], 2004, 17(3), 220. <http://eprints.ecs.soton.ac.uk/11003/1/Authors_and_open_access_publishing.pdf>, [accessed 04.02.11].
[39] *Ibid*.
[40] Creaser, ref. 15, pp. 16-17.

and therefore of lower quality, although this assumption is not true. The Study of Open Access Publishing (SOAP) defines OA for journal articles as follows

> *'An article is open access if its final, peer-reviewed, version is published by a journal and is free of charge to all users without restrictions on access or use.'*[41]

Others also explain that the journal articles deposited in IRs are the already peer-reviewed versions and therefore the apprehension of losing a quality tool is arbitrary.[42] One attempt to solve this trust problem is to adopt a certification process for IRs to introduce standards; not only concerning the quality but also in technical aspects. Examples therefore are the attempts of the Research Libraries Group and the American National Archives and Records Administrations to establish a network of "trusted repositories" through certification.[43] In Germany a certificate for repositories already exists from the German Initiative for Network Information (DINI; http://www.dini.de/dini-zertifikat/). In general, it can be said that the development of OA publications is questioning the traditional way of scholarly communication and the role of publishers within it,[44] which can lead to uncertainties about how to act by researchers.

2.7 (Institutional) OA Mandates

There are some efforts since the last ten years to support and accelerate OA publishing through so-called OA mandates, especially funder mandates and institutional mandates. In opposition to policies the expression mandate includes a component of requirement as the following definitions show. The Oxford Dictionaries define policy as follows

> *'a course or principle of action adopted or proposed by an organization or individual'*[45]

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[41] Dallmeier-Tiessen, S., Lengenfelder, A. Open access in der deutschen Wissenschaft – Ergebnisse des EU-Projekts „Study of Open Access Publishing" (SOAP). *GMS Medizin – Bibliothek – Information* [online], 2011, 11(1-2), 2. <http://www.egms.de/static/pdf/journals/mbi/2011-11/mbi000218.pdf>, [accessed 03.09.11].
[42] Harnad, S. Open access to research: changing researcher behavior through university and funder mandates. *JEDEM Journal of Democracy and Open Government* [online], 2011, 3(1), 36. <http://eprints.ecs.soton.ac.uk/22401/1/harnad-jedem.pdf>, [accessed 03.09.11].
[43] Jones, ref. 9, p. 126.
[44] Creaser, ref. 28, p. 158.
[45] *Oxford Dictionaries*. <http://oxforddictionaries.com/definition/policy?rskey=5mrKDB&result=1>, 2011, [accessed 03.09.11].

and mandate as

> *'an official order or commission to do something'*[46]

The unpublished "Glossary of terms" of the Publishing and the Ecology of European Research Project (PEER) also emphasises the requirement in the definition of institutional OA mandate.

> *'It is an institution's official policy whereby research staff are required to place a copy of their publication into an open access repository.'*[47]

Thus, institutional mandates are obligations for researchers to publish the mandated material in the IR. Reasons for the implementation of institutional OA mandates are to raise the amount of OA publications in the repository and therefore increase the visibility and citation rates resulting in research increased impact[48] and funding.[49] Another reason is that research indicates that the advocacy of IRs by libraries or institutions alone is not greatly successful if not supported by a mandate.[50]

There are different types of mandates: national mandates, funder mandates, institutional mandates, and departmental mandates. The content of such mandates can vary widely often depending on the type of mandates. Some institutional mandates for example obligate their members to publish everything, from a working paper to research results, others only mandating PhD theses.[51] The first institutional mandate in the UK was adopted from the School of Electronics and Computer Science at the University of Southampton in 2001.[52] Soon after, some funder mandates from the Research Councils United Kingdom (RCUK) followed; for example mandates of the Biotechnology and Biological Sciences Research Council or the Medical Research Council.[53] In contrary, there is no evidence for institutional OA mandates in Germany.

[46] *Oxford Dictionaries*. <http://oxforddictionaries.com/definition/mandate>, 2011, [accessed 03.09.11].
[47] Definitions used in the Publishing and the Ecology of European Research Project (PEER).
[48] Harnad, ref. 36, p. 39.
[49] Suber, ref. 21.
[50] Swan, ref. 31, p. 32.
[51] Creaser, ref. 15, p. 14.
[52] University of Southampton: School of Electronics and Computer Science. *Welcome to ECS Eprints Repository*. <http://eprints.ecs.soton.ac.uk/>, 2007, [accessed 10.02.11].
[53] Jones, ref. 9, p.38.

2.8 Researchers' Perceptions of OA Mandates

The good perception of OA publishing by researchers appears to extend also, according to current literature, to great willingness to adhere OA funder mandates or institutional OA mandates.[54] However, there is also evidence through a survey that many researchers do not know if their institution has a mandate or not[55] and that such mandates, funder or institutional mandates, are not a very important reason for OA publishing.[56] According to this contradictory findings it is unclear what the actual perception of OA mandates by researchers are.

2.9 Legal Situation

The legal environment has great influence on the possibility of the development of OA and institutional OA mandates in both countries, although there are some differences too.

2.9.1 UK

In the UK the main obstacle regarding OA publishing and OA mandates are not the Intellectual Property Rights including the Copyright but the attitude of the publishers towards OA. Publishers want and need to make profit and therefore want to prohibit OA publications for a certain time, usually between six and 12 months, to avoid competition with the freely accessible OA version of the same journal article and if not otherwise agreed with the researcher in the contract. On the other side, many publishers already allow the deposit of pre-prints or final versions of articles in a repository.[57] As a result of these different approaches the situation is felt to be complicated by researchers.

[54] Three principles for university open access policies**.** *SPARC Open Access Newsletter* [online], 2008, 120(2). <http://www.earlham.edu/~peters/fos/newsletter/04-02-08.htm#principles>, [accessed 03.09.11].
[55] Creaser, ref. 15, p. 8.
[56] Ibid, p. 18.
[57] Shepherd, ref. 18, p. 86.

2.9.2 Germany

In Germany the same problem as in the UK regarding publishers' attitude towards OA publishing exists if researchers alienated the exclusive rights to the publisher.[58] Additionally, the German Copyright includes the right of the author to decide exclusively if and where the work is published.[59] As a result of the constitutional right of academic freedom the public service law does not require researchers to publish but only to research and teach.[60] These legal conditions impede institutional OA mandates so far as researchers cannot be forced to publish. As measurement and to support the public availability of publicly funded research the *Sozialdemokratische Partei Deutschland (SPD; Social Democrat Party)* proposed a change of the Copyright Act to allow the publication of research output after six or 12 months independent of any agreement made within a contract of a researcher and publisher.[61] A positive decision about that proposition would be a step forward in the direction to the implementation of institutional OA mandates. Until then the HEIs in Germany can only encourage their researchers not to transfer the exclusive rights to publishers by OA policies strongly recommending OA publications in the IRs.[62]

2.10 Significance of Institutional OA Mandates

In literature institutional mandates are often appraised as the only tool that can effectively increase the amount of research published OA.[63] [64] Despite the positive view of academics towards institutional mandates[65] and the believe that mandates are the right thing to turn the academic world into an OA world, there are some

[58] Steinhauer, E. W. *Das Recht auf Sichtbarkeit*. Münster: MV Wissenschaft [online], 2010, p. 19. <http://fiz1.fh-potsdam.de/volltext/aueintrag/10497.pdf>, [accessed 03.09.11].
[59] Weenink, K. *et al.*, eds. *A DRIVER's guide to European repositories*, 2008, p. 106.
[60] Steinhauer, ref. 58, p. 28.
[61] Deutscher Bundestag. *Gesetzentwurf der Fraktion der SPD - Entwurf eines … Gesetzes zur Änderung des Urheberrechtsgesetzes* [online], 2011, pp. 1-3. <http://dip21.bundestag.de/dip21/btd/17/050/1705053.pdf>, [accessed 03.09.11].
[62] Metzger, A. *Die urheberrechtliche Gestaltung von Open Access Repositorien* [online], 2011, p. 33. <http://www.iuwis.de/sites/default/files/iuwis-gutachten-metzger.pdf>, [accessed 03.09.11].
[63] Swan, ref. 31, p. 32.
[64] Poynder, R. Peter Suber: leader of a leaderless revolution. *Open and shut? [Blog],* 01.07.11. <http://poynder.blogspot.com/2011/07/peter-suber-leader-of-leaderless.html>, [accessed 03.09.11].
[65] Pinfield, ref. 13, p. 33.

doubts about their effectiveness[66] and the question if their only advantage is that they accelerate a development which will happen anyway within a certain time.[67] Another point of criticism is the length of embargoes[68] which are contradictory to the preferred immediate access. Others discuss the characteristics of mandates and the expression itself as usually the mandates are used more to educate and encourage researchers rather than force them to publish OA.[69]

2.11 Funder Mandates and Their Impact

According to current literature funder mandates in the UK apparently influence the development of IRs and institutional mandates as well as support the advocacy work for those.[70] Even though, many researchers stated in a survey that they do not know if their Research Council has a funder mandate, they also reported about a greater awareness of funder mandates than of institutional mandates.[71] Thus, funder mandates can be a good pioneer.

In Germany a few funders have already implemented a publishing policy, for example the *Deutsche Forschungsgemeinschaft (DFG*; German Research Foundation).[72] However, also due to the legal situation they do not have an impact on the implementation of institutional mandates.

2.12 Summary

In general, OA and institutional OA mandates are seen as a positive development to faster disseminate research, increase citation rates, and increase research impact not only by HEIs and their IRs but also by researchers. Nonetheless, there are

[66] Publishing and the Ecology of European Research (PEER). *Annual report: year 2* [online] <http://www.peerproject.eu/fileadmin/media/reports/D9_8_annual_public_report_20100930.pdf>, 30.09.10, p. 2, [accessed 03.02.11].
[67] Pinfield, ref. 13, p. 33.
[68] Shepherd, ref. 18, p. 86.
[69] Three principles for university open access policies, ref. 54.
[70] Creaser, ref. 15, pp. 9-10.
[71] *Ibid*, p. 9.
[72] Kersting, A. and Pappenberger, K. Promoting open access in Germany as illustrated by a recent project at the Library of the University of Konstanz. *OCLC Sytsems & Services* [online], 2009, 25(2), 105-106. <http://kops.ub.uni-konstanz.de/bitstream/handle/urn:nbn:de:bsz:352-opus-87603/2009Promoting_open_access.pdf?sequence=1>, [accessed 03.09.11].

different opinions regarding the concept, characteristics, and necessity of institutional mandates as well as legal issues.

Chapter 3: Methodology

This chapter describes and justifies the methods used for the data collection and analysis. The respective sub-sections explain why and how the methods were used and outline problems that emerged. Finally, a summary is provided.

3.1 Overview

The following aims and objectives were developed to gain information and answers to the research questions. The systematic collection of generic data like repository age, document types published, and existence of institutional mandates through online questionnaires to capture the repository landscape of HEIs in the UK and Germany. These online questionnaires were the basis to select interviewees for semi-structured interviews with the objective to survey the experiences and perceptions of IR managers with an institutional mandate towards the effects of these mandates on their daily work as well as the expected implications of such mandates by IR managers without one. The third aim was the comparative analysis of the collected data from both countries.

Different methods of data collection and data analysis were used to achieve the aims and objectives. These methods included a theoretical approach for the background analysis through a thorough and critical literature review, online questionnaires for the collection of quantitative data, semi-structured interviews for the collection of qualitative data, and a comparative and thematically ordered analysis.

3.2 Literature Review

The literature review was amended and extended in-line with the topics that emerged from the data analysis in order to gain deeper understanding.

Much has been written in the literature about OA repositories in general, however there was less information about institutional mandates and almost nothing about their effects on IRs or rather the daily work environment of IRs. To gain the broadest possible knowledge and relevant information an extensive literature search has

been done including several methods and sources. The following, non-exhaustive list provides an overview of the resources and sources used.

- Library catalogue of the Pilkington Library, Loughborough University.
- Databases through the MetaLib interface (access to electronic resources) of the Pilkington Library and later through the new Catalogue+ which allowed a search for articles within the library catalogue. Very rich of content related to OA and OA mandates were the databases "Library and Information Science Abstracts (LISA; CSA Illumina)", "Library, Information Science & Technology Abstracts (Ebsco)", and "Emerald EMX95". The researcher also used the "related item" search function of the databases.
- Very valuable for the researcher was the subscription to the JISC-repositories e-mail-list of the Joint Information Systems Committee[73] and the SPARC (Scholarly Publishing and Academic Resources Coalition) Open Access Newsletter (SOAN).[74] Information given within this list included discussions about current topics as well as references to literature and websites.
- Google and Google Scholar as well as the metadata search engines dogpile and MetaGer.
- Topic related websites known by the researcher from previous work experience in this field, especially for German literature. These websites often led to other valuable websites of institutions highly involved in the development of OA.
- Bibliographies of other researchers.

The literature review considered relevant literature and information up to the end of August 2011.

3.3 Data Collection

The content and design of the questionnaires and interviews as well as the e-mail invitations were discussed with the supervisor of this dissertation and thereby adjusted to the aims and objectives. An example of the English (Appendix 1) and

[73] JISCmail. *JISC-Repositories Home Page*. <https://www.jiscmail.ac.uk/cgi-bin/webadmin?A0=jisc-repositories>, [n.d.], [accessed 01.09.11].
[74] SPARC. *SPARC Open Access Newsletter & Forum.* <http://www.arl.org/sparc/publications/soan/>, 2011, [accessed 01.09.11].

German questionnaire (Appendix 2) as well as the interview schedule in English for the group “with a mandate” (Appendix 3) can be found at the end of the dissertation. The questionnaires and interviews were also piloted with a contact working in the OA and IR field. The piloting process was a very valuable experience and helped to detect ambiguity and to improve the questionnaires and interviews which in turn led very likely to an improved data collection and useable data.

Both the questionnaires and the interviews were provided in the native language of the participants to ease the use and to raise the probability of responses. Thus, the researcher had to translate the online questionnaires and interviews from English to German for the German participants and the results back from German to English to be able to analyse the data. One difficulty connected with the translation was the similar sounding expressions dissertation and the German *Dissertation* which though have different meanings and the expression PhD. The English expression dissertation was used in the English questionnaire for both undergraduate and postgraduate final theses, although this appeared to cause some uncertainty for English participants as well, as it was not adequately explained in the questionnaire. In the German questionnaire the equivalents to the English expressions dissertation and PhD had to be distinguished and so bachelor and master degree were used for the English dissertation and the German expressions *Dissertation* and *Habilitation* were cumulated under the English word PhD. The researcher was aware of the fact that these categories are not a perfect match and can be argued. However, a possibility to be distinct as possible in both languages but also be able to compare the data afterwards had to be found.

In the preparation phase of this research project it was planned to have an equal number of interviewees from institutions with and without a mandate from both countries. Nevertheless, as the replies to the online questionnaires revealed that there are no candidates for an interview in the group “having a mandate” from Germany this approach had to be changed. Due to that development it was decided to interview all UK institutions with a mandate, in total seven, to obtain information of the broadest possible experience. An equal number of interviewees from institutions without a mandate, four each from both countries, were interviewed regarding their expectations and perceptions of institutional mandates.

In both data collection methods the following ethical issues were considered and addressed.[75]

- The participation was voluntarily.
- The intended use of the data was explained.
- The participants were informed about the recording of the interview and actively agreed to it. They were also informed about the destruction of the data after the completion of the dissertation.
- The participants were informed about the right of withdrawal at any time.
- The participants were asked about their preference regarding the use of their name within the dissertation. If the participant did not want to be named in the research, they were promised anonymity. In the end, all of the data was used anonymously as not all participants agreed to the use of their name or their institution's name. Therefore, it was decided to treat all data the same with the intention to create greater consistency.

3.3.1 Online Questionnaires

The method of an online questionnaire was chosen to gain quantitative data that captured the repository landscape of HEIs in the UK and Germany. Desk based research to gather this information may have been possible, however, it would have taken much longer than the questionnaire considering the huge number of HEIs in these two countries. Additionally, the probability of obtaining up-to-date and accurate data was higher with the online questionnaire than with other available sources, such as ROAR, the Registry of Open Access Repositories Mandatory Archiving Policies (ROARMAP), and the Directory of Open Access Repositories (OpenDOAR). All these data sets collect data from registered IRs and mandates only. Consequently, there is a high probability that some of the IRs and mandates of HEIs in the UK and Germany are not registered and therefore not listed. OpenDOAR, additionally, has to be updated manually regarding the size of the IRs and might provide some incorrect information. On the other hand, there are

[75] Lougborough University. *Ethical clearance checklist*. <http://learn.lboro.ac.uk/course/view.php?id=4173>, [n.d.] [accessed 01.09.11]. – not publicly accessible

limitations for an online questionnaire. Firstly, it will probably not be answered from everyone it was sent to. Secondly, it is not known who is answering the questions and how thoroughly. Thirdly, ambiguous questions can cause problems in answering them correctly.[76] Despite the piloting there were still some inaccurate formulated questions. For example, asked for the number of documents held in the repository it should have been clearly defined that the researcher was interested in the number of full-text documents.

To design the questionnaires different software, in particular SurveyGizmo[77], SurveyMonkey[78], and eSurveysPro[79], were evaluated regarding their features like ease of use and data analysis possibilities. Finally, the free version of SurveyGizmo was selected, although two features were not provided which the researcher would have liked to use. However, neither of the other software do offer these features in their free versions. The first feature that could not be used by the researcher was to add logic to the order of questions. On the one hand, this was negative as every participant could see all questions even if the answer to the question before made it unnecessary to answer the next one. This inability to hide questions, however, created the possibility for participants to answer questions, for example the question regarding “planned mandates”, even if they already answered that they have a mandate implemented. The questions regarding planned mandates would have been hidden for participants who stated that they already have a mandate if the researcher could have been able to do so, as the researcher thought too much in categories in the beginning of the research. The other restriction was the inability to make answer fields mandatory as not all respondents have to answer all questions. This restriction resulted indeed in some not fully answered questionnaires which then could not be or only used partially for the data analysis.

The possible participants for the online questionnaires were invited by e-mail. Thereby, the researcher tried to contact the repository manager or the department directly to enhance the response rate. In both countries there were repositories which are used by several institutions together. In these circumstances the invitation was sent to each single institution as they are able to filter their own data out of the collectively used repository. The researcher considered Monday and Friday as unfavourable days because of the workload the institutions may have on these days

[76] Bryman, A. *Social research methods*, 3rd ed., 2008, pp. 218-219.
[77] *SurveyGizmo*. <http://www2.surveygizmo.com/>, 2011, [accessed 09.07.11].
[78] *SurveyMonkey*. <http://de.surveymonkey.com/>, 2011, [accessed 09.07.11].
[79] e*SurveysPro*. <http://www.esurveyspro.com/>, 2011 [accessed 10.07.11].

around the weekend and so the invitation to the online questionnaires as well as the reminder was sent on a Tuesday. The questionnaires were open for fourteen days.

The invitation to participate in the online questionnaires was first sent to 179 HEIs in the UK and Germany, whereas 96 institutions were invited in the UK and 83 institutions were invited in Germany. Shortly after this invitation was sent out the researcher got the offer from one member of the United Kingdom Council of Research Repositories (UKCoRR) to send the invitation via their closed e-mail list of repository managers in HEIs in the UK. This offer was very welcomed but the list of addressed institutions had then to be compared to the institutions the invitations were already sent to, to detect any overlaps. Abstracted the overlaps found the number of possible responses in the UK raised to 120 and in total to 203. The response rates were as follows. In Germany 30 institutions, respectively 28 as two replies were double replies, responded to the online questionnaire what is equivalent to 33.73 per cent. In the UK 27 institutions replied which is a response rate of 22.5 per cent. The response rate in total was 27.1 per cent and can be judged as good, although not as representative.

Due to the limitations explained above there were some mistakes and problems that led to disqualified or partially disqualified replies. These disqualifications in turn led to some fluctuations in the evaluation of the responses. In the UK one institution stated that they have one document in their repository although they have had a mandate since January 2007. This is a very unlikely number and is probably a typo or it is indeed a more or less inactive repository. Therefore, this particular answer was not counted for the statistics about the average numbers of documents in the repositories. Another reply in the UK did not provide the date when the repository was launched and also no number of published documents. Thus, could not be counted for the statistical data of average numbers of documents and average age of the repositories. A third answer could also be a double reply. As this could not be identified distinctively each is counted as a single reply. In Germany, two institutions stated that they have a mandate for German *Dissertationen* which will be called PhDs from now on as explained in section 3.4. This could have been a misunderstanding due to an imprecise question as outlined previously. In particular, the situation in Germany demands the publication of PhDs but not necessarily in an OA IR. Nonetheless, it could be possible and therefore they were counted, although with some doubts.

In the UK seven respondents without a mandate and all respondents with a mandate, also seven, were willing to participate in the follow-up interview. In Germany only institutions without a mandate, in total twelve, agreed to that.

3.3.2 Semi-structured Interviews

The qualitative method of an interview was selected to gain insight into experiences, opinions and expectations of the interviewees with the objective to understand the effects of institutional mandates on IR services delivery. The fact that the interviews represent opinions and experiences of the individuals and not necessarily the position of the institution was expressed and emphasised by many interviewees. Although, a structured interview would have been a good choice to obtain comparable replies and to pre-define codes for the analysis, it would have been minimising the possibility to enhance the interview when conducted[80] and as a result important opinions and views of the interviewees could have been lost. On the contrary, a semi-structured interview

> *'… has a sequence of themes to be covered, as well as some prepared questions. Yet at the same time there is openness to changes of sequence and question forms in order to follow up the answers given and the stories told by the interviewees.'*[81]

Thus, a semi-structured interview allows the researcher to ask questions relating to emerging themes during the interview what was the main reason for selecting this form of interview technique. Nonetheless, the researcher tried to stay focused on the research questions, although there were many other interesting topics mentioned around OA and mandates.

According to the concept of a semi-structured interview the interview schedule for this research project consisted of twelve pre-defined questions organised into four themes. Question two was changed for the group "without a mandate" from "explaining the implementation process" to "Why does your institution not implement a mandate?". Additionally, the order of two questions were adjusted after the first few interviews as the researcher noticed that it flew more naturally.

[80] Pickard, A. J. *Research methods in information*, 2007, p. 175.
[81] Kvale, S. *Doing interviews*, 2007, p. 65.

The interviewees from the institutions without a mandate were selected at random by the incoming replies to the questionnaires. The invitations to the interviews were sent consecutively and the interviews were conducted within a time frame of six weeks. The pre-defined interview questions were sent to the interviewees at least two days before the actual interview to obtain as a complete picture of the situation and circumstances of the institution regarding the institutional OA mandate as possible and it was thought to be less effective in that regard if the interviewees were asked to answer the questions spontaneously. As further preparation to the interviews the data provided in the questionnaires were checked. In doing so the possibility was given to clarify some of the results in the questionnaires, for example, typos as well as setting this information in context to the questions and replies in the interviews. All interviews, except of one which was conducted via Skype, were performed by telephone, depending on preference of the interviewee. Due to limitation in time and finance face-to-face interviews were not possible. After receiving permission of the interviewees, all interviews were recorded and then transcribed. The transcription was not done word by word, what means that repetitions and parts too far away from the research questions were left out. The reason for that approach was to reduce the amount of time needed for the transcription. Nonetheless, the main and important parts were transcribed fully. In this way a pre-analysis was undertaken.

3.4 Data Analysis

The questionnaire results and interview data were first analysed separately and then thematically synthesised for the presentation of the results.

3.4.1 Online Questionnaires

The analytical tools provided by SurveyGizmo could not be used for the analysis of the quantitative data as there were two separated questionnaires in different languages. Thus, a combination of the results was not possible. As another possibility for the data analysis the use of the statistics software SPSS[82] was considered. However, after balancing the advantages and the estimation of time needed to learn how to use this software properly, it was finally decided to transfer

[82] IBM. *Introducing IBM SPSS Statistics 20*. <http://www-01.ibm.com/software/uk/analytics/spss/>, [n.d.], [accessed 02.09.11].

the data to Microsoft Excel, which functions were well known by the researcher. Excel was also used to create the graphs presented in Chapter 4.

3.4.2 Semi-structured Interviews

The qualitative data analysis software ATLAS.ti[83] was evaluated as possible tool for the analysis of the interview data. Again, after careful consideration of the potential facilities regarding coding and presenting the data, it was felt that this software did not offer big advantages against the method of copying the quotes for each code in separate Microsoft Word files. Therefore, the raw text of the transcribed interviews was read and relevant text regarding the research questions was marked and copied into a new file. Then the so created new text body was coded. Subsequently, several codes were combined under a theme.[84] These themes were detached from the original structure of the interviews.

3.5 Summary

Different methods of data collection were used for this research project and in order to achieve the aims and objectives. On the one hand, quantitative data were collected through online questionnaires to gain background information of the IR landscape in the UK and Germany. On the other hand, in-depth information, opinions, and experiences were collected via semi-structured interviews. The analysis of the interview and questionnaire data was done separately. Thereby, the structure of the interviews was abandoned to allow the formation of repeating ideas and themes without a pre-defined structure.

[83] *Atlas.ti Qualitative data analysis*. <http://www.atlasti.com/>, 2011, [accessed 02.09.11].
[84] Auerbach, C. F. and Silverstein, L. B. *Qualitative data*, 2003, pp. 35-39.

Chapter 4: Results

The following chapter presents the questionnaire and interview results thematically. The key results are highlighted in a summary.

To indicate if the reply is from an interviewee from the UK or Germany and from an institution with or without a mandate the interviewees were alphabetically labelled. An overview can be found in Appendix 4. If not stated otherwise the quotes and statements are valid for all institutions independent of country and an existing mandate.

The expression “published” is used to refer to all documents held in a repository although, it is understood that in the academic world this expression is usually connected to documents published at an academic publisher.

4.1 General Data about Repositories and Mandates

The questionnaires were sent to public HEIs in the UK and Germany, both leading countries in the development of IRs.

4.1.1 Numbers of Repositories

The number of repositories launched by the institutions responding to the questionnaires is very high in both countries. In the UK all 27 institutions have a repository. In Germany 26 of the 28 counted replies established a repository what is equivalent to a share of 92.86 per cent. For both countries this resulted in a repository rate of 96.36 per cent.

4.1.2 Age Structure of Repositories

Although, both countries have a high rate of existing repositories in HEIs there is a significant difference in the history of development of those repositories. Most of the institutions in Germany launched their repository in the years 1998 to 2000 compared to the UK where all repositories were launched after the year 2000, most of them in the years 2006 to 2008 and an increased rate in 2010. The oldest German repository is from 1995 and the newest one from 2008. The average age of the repositories in Germany is 10.31 years whereas in the UK it is 4.15 years with

the oldest repository from 2001 and the newest one from 2010. The graphical illustration below shows the age structure of these repositories. For the calculation of the data only the year was taken as not all institutions provided a more detailed age with month and year.

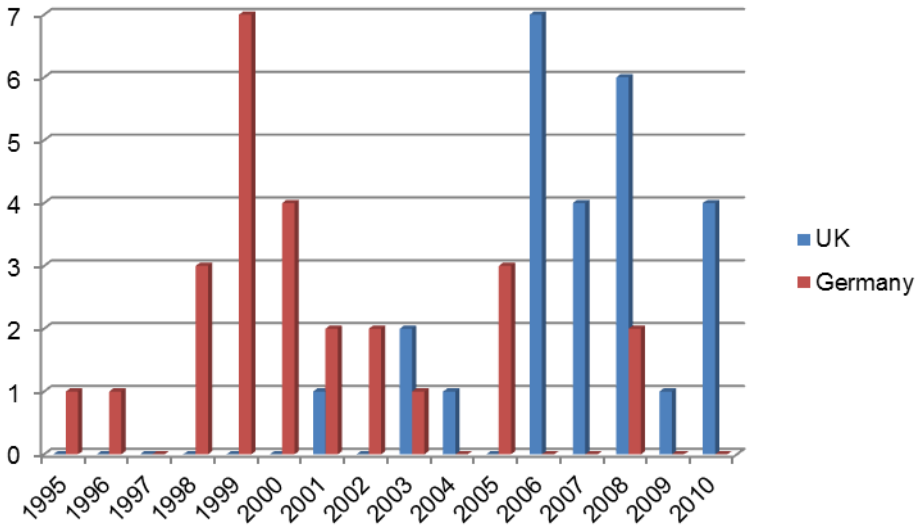


Figure 4.1: Numbers of Repositories Launched by Years

4.1.3 Development of Mandates

Sixteen (59.26 per cent) of the institutions in the UK have a mandate for different document types with the oldest mandate implemented in January 2007. Figure 4.2 presents the development of the implementation of mandates in the UK by years. Two institutions implemented mandates for different document types in different years, so the total number of mandates in that graph is actually higher than the number of institutions having a mandate.

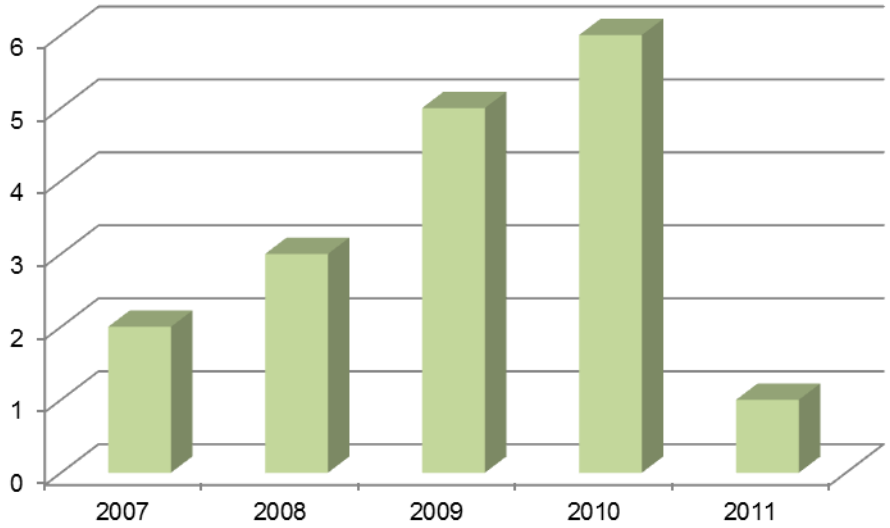


Figure 4.2: Numbers of UK Mandates by Years

There was a steady increase in the number of institutional mandates during the years 2007 to 2010 followed by a significant decrease for the year 2011 so far. Interviewee J provides one possible reason for this decrease.

> *'… the repository community is quite a caring and sharing one. We tend to know what problems other people are wrestling with.'*

Consequently, the institutions are aware of the problems that are involved with the implementation of a mandate, especially with the enforcement, as described in section 4.4 and decided not to adopt one at the moment or even decided actively against it because of a lack of trust in the success of such a mandate as again Interviewee J highlighted.

> *'We not attempt to - I'm not convinced that they're necessarily a productive thing to have. We have other ways of ensuring. … I'm not convinced that any institution that has a mandate has found it massively successful, …'*

Another reason for not implementing a mandate was the preference of many institutions to use encouragement to engage with OA and the repository rather than enforcement.

> *'I think for our institution it was the case of not wanting to be too heavy handed with our researchers. We didn't want using the repository to be seen as*

> *something the researchers be enforced to do. They wanted them to be something they're willing to do and wanted to engage with.'* (Interviewee K)

The researcher additionally considered a connection between the implementation of institutional mandates and the affiliation to the Russell Group or the 1994 Group, associations of universities committed to excellence in research and teaching, but there was no such evidence. One of the seven institutions with a mandate is part of the Russell Group, another one part of the 1994 Group, and two other institutions define themselves as research intensive institutions. In the group of institutions without a mandate one is a member of the Russell Group and two are research intensive institutions.

In Germany the situation is somewhat different also due to legal reasons as described in section 2.9.2. Only two institutions stated that they have a mandate for PhDs but cannot provide an exact date of implementation as this vary from faculty to faculty which are deciding about such an implementation in their regulations. It is also unclear if they are real institutional OA mandates for PhDs or if it was a misunderstanding based on the general publishing mandate for PhDs in Germany.

Especially the German institutions thought that the decision about the implementation of a mandate has to be made by a higher level management of the university and that they are not qualified to decide about it. German repository managers also do not seemed to be actively and directly in close contact to the senior management of the university to influence their decision or create greater awareness regarding OA and mandates as this appears to be the task of higher level management within the libraries hosting the repository.

> *'I don't know. I think it is organisationally difficult and would be decided at a higher level.'* (Interviewee O)

As the situation in Germany is legally different than in the UK there are no mandates planned. In the UK five (18.19 per cent) of the institutions plan to implement a mandate, whereas only one of them will implement their first mandate. The other four institutions plan to establish further mandates for other document types.

4.2 Initiation and Motivation

Although, there is a great variety of initiators and drivers for the implementation of institutional OA mandates the motivation seemed to be the same throughout all interviewed institutions.

4.2.1 Initiators and Drivers

One of the named initiators is the senior management or Head of the University as the following statements from two different interviewees confirm:

> '…*we had a new Vice Chancellor who is very much an advocate of open access and I think he was involved in the decision to put a mandate in place. So I think the initial decision came from the top really of the university …'* (Interviewee A)

> *'… I think the motivation kind of came from on high …'* (Interviewee B)

The second group of initiators included libraries and repository managers driven by a commitment to the OA idea, the wish to increase the content of the repositories, concerns about steadily rising costs of journals' subscriptions, and shared concerns of libraries, research managers, and Research Offices of HEIs about the beneficial use of research output to increase their research impact. The exemplary statements below highlight some of these aspects.

> *'… the initial force came from the library and we've had a repository for a long time and it had bits of contents added to it, but not any great rise and I think the library management wanted to do, that we do something to boost the content and to promote open access. That was the certain rationale to implement the mandate.'* (Interviewee F)

> *'… from the library perspective serials' and journals' subscriptions went absolute high and an analysis was done what can we do about this and the open access route came into the debate and discussion. … The second motivation was predominantly from senior research managers within the university. There is a perception that we're not maximising the benefits of our research outputs to the best that we can possibly do and citation came into play and all those things.'* (Interviewee G)

The initiators described above were more often named than students, researchers, and university departments. Nonetheless, in some institutions the initiative came

from those groups who seem to be very active once interested in this topic as Interviewee D illustrated with several statements throughout the interview.

> *'We're also involved within the university, within the Graduate School who were quite keen to get their research and their researchers' material out there.'*

> *'I think part of getting it to that stage was a push from the students to make their work open access available. … Some students wanted to make their material more openly accessible.'*

> *'And the students themselves are a lot more internet savvy these days. We're questioning why a copy goes in the library and they produced it in electronic format, then they print it off, bind it and give it to the library.'*

Two projects were stated as drivers to implement a mandate – the EThOS Project (Electronic Theses Online Service) from the British Library and the Cultural Data Project (CDP).

> *'Part of the drivers for it was the EThOS Project. So there is the EThOS Service from the British Library now and it was felt that it would be valuable for us to be engaged with it. And to be engaged we had to be able to supply our available theses to EThOS. And therefore, we needed to have something in supply by which we collect them, so we could supply them.'* (Interviewee C)

> *'Our repository actually grew out of the Culture Project which ran from 2007 to 2009. So when I was developing the policies the mandate was part of the policies.'* (Interviewee E)

4.2.2 Commitment to Open Access and Increase of Content

Independent of country and the existence of a mandate the commitment to the OA idea in general appeared to be an important factor stated by almost all institutions. Below are two examples of such statements from Interviewee A and F.

> *'I think the intention there was to show that there's a high level of commitment within the university to the general open access initiative.'* (Interviewee A)

> *'… and the general believe that it was the right thing to do.'* (Interviewee F)

Closely connected to the commitment to OA was the wish to fill the repositories with documents, so that they gain importance and also to confirm their right of existence.

'Well, I'm hoping that over the time it will obviously increase the number of items.' (Interviewee E)

'A mandate is for the repository meaningful regarding the amount of material and therefore strengthen the importance of the repository, but also of the institution. This also adds to the right to exist …' (Interviewee N)

The increase in content allowed institutions to use the repository as a central service what is being looked at a major benefit for the repository and its importance within the institution and the research system as Interviewee D described.

'What we've been able to do is to use the repository as a document delivery service which we've not been able to do in the past because it had no content in it.'

On the other side, some institutions recognised problems connected to the increase of content, in particular with embargoed documents which are held in the repository but are not publicly available as mentioned by Interviewee D as well as problems to manage the amount of incoming documents, especially expected by institutions without a mandate as confirmed, for example, by Interviewee J.

'… that there are a lot of issues that are embargoed. I think sometimes despite that we put up the abstract, but then we're unable to supply full-text through the embargo.' (Interviewee D)

'At the moment, if we had a whole horde of stuff coming in full-text we wouldn't be able to deal with it.' (Interviewee J)

4.2.3 Research Impact and Promotion

However, not only the commitment to the OA initiative was a reason for the interviewed institutions to increase the content in their repositories. The main motivation for increasing the content and therefore implementing a mandate was to gain and showcase their research output and impact and to promote and market their institution. The following factors are confirmed by the interviewees as the most important regarding to these aims.

- Complete collection in one place

  The complete collection of all research output in one place is more often named by interviewees from institutions without a mandate.

  'Clearly it is an advantage to have a mandate because you then can collect open access publications or the publications of the own institution more complete …' (Interviewee L)

  '… a single place for people to find information about the whole range of research being done within the university …' (Interviewee I)

- Visibility and Citation rate

  Visibility and therefore the increased citation rate as a result of it appeared to be the main ideas behind the implementation of institutional mandates in the UK. The factor citation rate also provides a connecting point to academics' interest.

  'Obviously, for the institution there's the increase in the visibility to the University's research which also follows through for the academics as well.' (Interviewee I)

  'Key benefit is the visibility of our research. … and there's certainly a growing body of evidence that our material is been more used or cited which I think is impacting on the University's reputation as well.' (Interviewee D)

- Research Excellence Framework (REF) 2014

  Directly connected to the visibility and citation rate as motivation for the implementation of an institutional mandate was the REF.

  'I would say that it is the REF - the Research Excellence Framework 2014.' (Interviewee E)

  '… and actively linked into the REF 2014.' (Interviewee B)

- Marketing and Promotion

  Many interviewees said that the repository can be used as a promotional and marketing tool due to the publicly visible research output that raises the research profile.

> '*I think it's also another, just a different way for the University to market and promote itself more widely.'* (Interviewee I)
>
> *'… and it would be the presentation platform to the outside world for the research done by the university.'* (Interviewee L)

Only Interviewee D, also having a mandate adopted, mentioned directly the competition between universities beyond the REF, although the researcher thinks that this was an important factor as well within the very competitive environment in the UK in which HEIs have to sustain their position.

> *'… we saw that … is doing it as well. So there is a certain competition if you like.'*

As a result of using the repository and mandate as marketing tool the institutions hope to attract more funding, researchers, and students.

> *'Probably the main one is to attract more researchers and to attract them to add their research to the repository. That's the main reason for having a repository in the first place.'* (Interviewee K)
>
> *'From the institutional view, if you can showcase your research work it better attracts students and will attract more funding and all these sorts of things.'* (Interviewee E)

Even though, almost all interviewees recognised the repository as a good promotional tool Interviewee D referred to problems with this kind of use unless the research output is published completely in the repository, what is hoped to be achieved by an institutional mandate.

> *'One of the issues coming up is the sense that what's available through the repository is not everything that we publish. We have a separate inward facing database of research communication in which the university republish about 4000 articles the year and only 10% of those are in the repository. … giving that the repository is mostly our showcase of what we publish, at the moment it doesn't really reflect that.'*

4.3 Repository Content

The following section describes the actual use of repositories, the factual numbers of documents in the repository after the implementation of a mandate compared to the expected amount of documents by institutions without a mandate as well as information about the types of documents published and mandated.

4.3.1 Full-text vs. Metadata

The understanding of the actual task of a repository differs between the two countries but also the institutions within the UK. Many, mainly in Germany and institutions without a mandate in the UK, understood the task of a repository to store full-text documents, as highlighted by Interviewee J. Whereas, institutions with mandates often use the repository as bibliographic database and internal review purposes.

> *'It would be nice to have a good set of full-text in there. That's what the repository was designed for in the first place … our policy is to have full-text unless there are legal reasons why not.'* (Interviewee J)

> *'… we have a very high number of metadata records but only properly about 5% of those are full-texts …'* (Interviewee G)

As already outlined in section 3.3.1 it was not made clear in the questionnaires that the main interest was in full-text mandates and therefore the results are more difficult to compare. The following two statements from Interviewee I from an institution without a mandate give evidence that some institutions connect an institutional mandate with full-text publications and that a mandate for bibliographic records is not acknowledge as a full institutional mandate.

> *'Obviously, there's the effect of attempting the full-text for repositories …'*

> *'The mandate that we implemented in February this year, so very recently is only for the citation information rather than the full-text. So, this is not really the kind of mandate, certainly not the mandate that ROARMAP for instance would accept.'*

Next to the different understanding of the content of IRs, Interviewee I named the following as reason why they do not have a full-text mandate but only an internal one to collect bibliographic data.

'There were a number of issues with that. I mean, partly the academics didn't actually want to give us the full-text. There were a number of concerns about the quality of the kinds of full-texts that they could use, certainly according to their copyright agreements. There were some issues about constantly being draft information rather than to scan finished forms. There were other issues from some other departments from the university to do with the commercial value of the research output. … And there were also issues from Medical School particularly and other areas like Psychology as well to do with the kind of sensitivity of the information that the full-text might contain.'

The different perception of the expression institutional mandate and if it is valid only for actual full-text mandates or also for the mandated collection of bibliographic data of research output indicates that there is a lack of common vocabulary and definitions in this area.

4.3.2 Numbers of Documents

In general, the numbers of documents in the repositories vary widely in both countries also dependent on size of the institution and if it is a research intensive one or not. Additionally, there is a difficulty in comparing the numbers of documents straight away. As illustrated previously the inexactly formulated question for this part in the online questionnaires let it open if the figures given include only full-text documents or also metadata records. According to the follow-up interviews it is a mix of full-text and bibliographic data records in the UK, whereas in Germany most, if not all, repositories are full-text servers. Nonetheless, the average number of documents according to the figures given in the online questionnaires was in the UK 3,624.52 and in Germany 3,486.31.

It would be interesting to know if there is any relationship between the existence of a mandate and the document numbers published. As there are no mandates in adequate quantity in Germany the following analysis covers only UK data of the sample. As Figure 4.3 reveals the number of published documents from institutions with a mandate is almost double as high as the amount of institutions without one. Though, it has to be considered that there were less institutions without a mandate (11) in the sample than institutions with a mandate (15). However, it indicates that institutional mandates actually increase the number of documents in a repository.

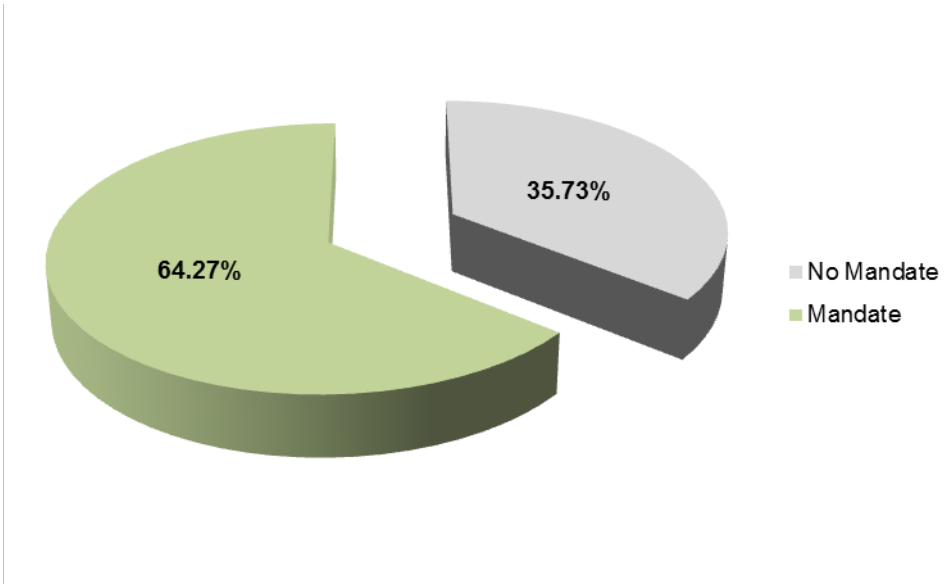


Figure 4.3: Relationship Mandate and Number of Published Documents

This result correlates with the expectation of interviewees from institutions without a mandate who linked this increase to the enforcement of the mandate like Interviewee K and Interviewee J.

> *'I think it would almost certainly increase the number of documents. I think it would change, I think it would change the number because there are researchers that don't engage with it and having a mandate would force them to do so.'* (Interviewee K)

> *'It ought to increase the number of documents, yes. That's what ought to happen. In practice, I don't think a mandate on its own would do that. I think it would need to be backed up with some sort of sanctions, if either encouragements or sanctions to ensure that there is a significant increase of full-text.'* (Interviewee J)

Interviewee D who has only an institutional mandate for theses also named the effect of a mandate for certain document types on other document types regarding the number of documents published in the repository.

> *'So by virtue of having the e-thesis mandate we've also been able to add probably about between 60 and a 100 documents, published documents, into our peer-reviewed repository.'*

In German IRs mainly PhDs are published and therefore the main issue related to the number of documents published was that with a mandate the number of other documents would increase.

> *'In Germany, there are mainly PhDs published in the repositories at the moment and it can be argued about if this is real open access as open access is about documents published by academic publishers. So with a mandate the amount of other documents would increase.'* (Interviewee N)

On the other side, interviewees from institutions with a mandate mainly confirmed an increase of numbers of documents but with some restrictions referring to other measurements they have done alongside the mandate, for example, advocacy work or that it was too early to say as the mandate was still very young.

> *'Certainly since we put the mandate in place the number of items in the repository has increased significantly. Although, we have been doing other things as well to encourage ... So I'm not sure that I can say that it was solely because of the mandate.'* (Interviewee A)

Related to these opinions it is an interesting question if the age of a repository is a factor for a high number of published documents in an IR rather than a mandate. Even though, this comparison is limited to the sample with an uneven amount of IRs for each age group, Figure 4.4 indicates that this assumption is correct for Germany, with some exceptions, for repositories which are at least nine years old. For the UK it shows the same development for repositories up to the age of five years with much lower numbers of published documents in older repositories. Related to the different ages of the IRs in Germany and the UK this may also be a reflection of the history of development of IRs in both countries and the activities around it which seem to be higher at the beginning of the development.

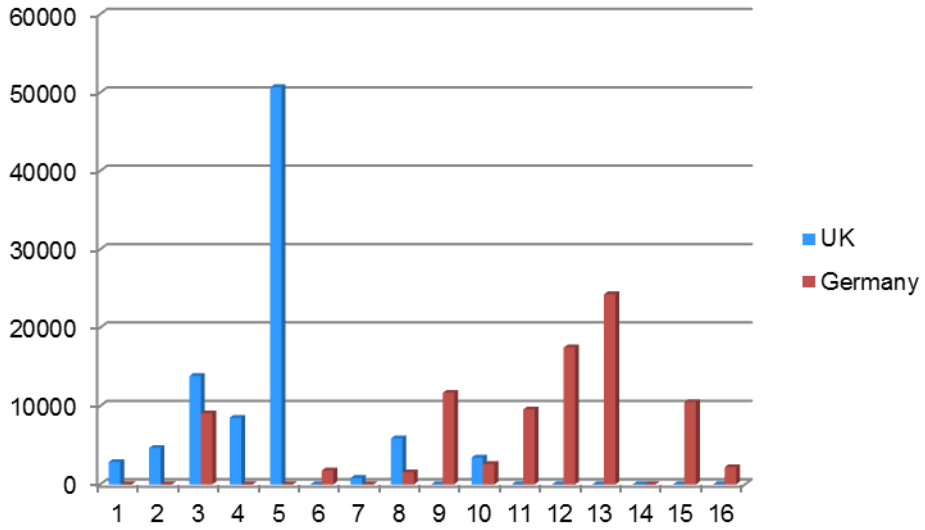


Figure 4.4: Numbers of Documents Related to the Age of Repositories

Figure 4.5 is extended by the age of the mandates. Although, most would expect a higher number of documents in a repository the older a repository is and due to the existence of a mandate the graph illustrates that such a connection does not exist necessarily. The numbers of published documents related to the age of the mandate reflect the development of the numbers of published documents related to the age of the IR with an increase from early on followed by a decline. So the existence of a mandate does not quarantee a steady increase in the number of published documents in an IR. The amount of documents depends on what document types are mandated, the size of the institution and if the institution is a research intensive one or not rather than on the existence of the mandate and the age of the repository. Therefore, to be able to identify such a relationship the institutions should be classified in size classes and be compared to similar research intensive institutions. Such a classification is not possible with the kind of collected data of this sample.

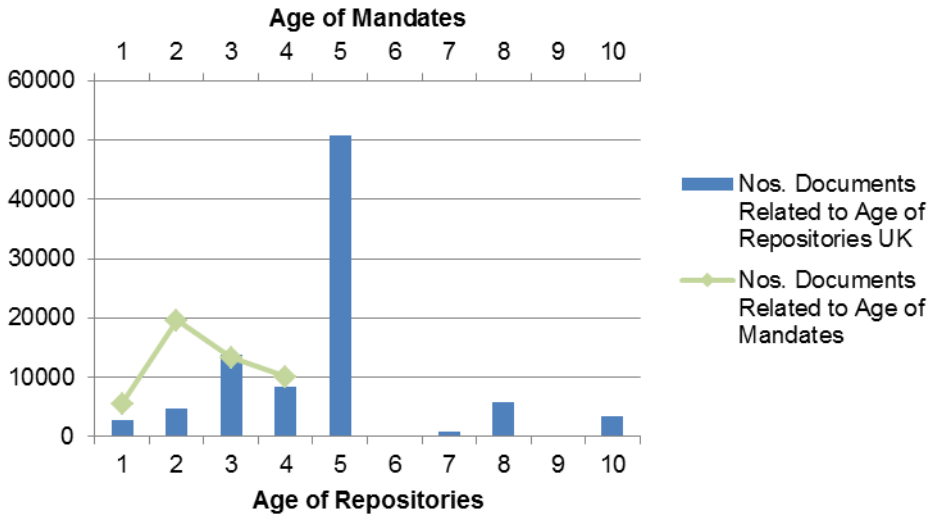


Figure 4.5: Numbers of Published Documents Related to the Age of Repositories and the Age of Mandates

4.3.3 Types of Documents

The variety of document types published in repositories is high, with journal articles, PhDs, reports, research papers, and proceedings most likely in the UK closely followed by books. In Germany the document types are more evenly spread and there seems to be a higher amount of teaching material and lectures in the repositories than in the UK. Figure 4.6 shows the amount and variety of published document types for both countries.

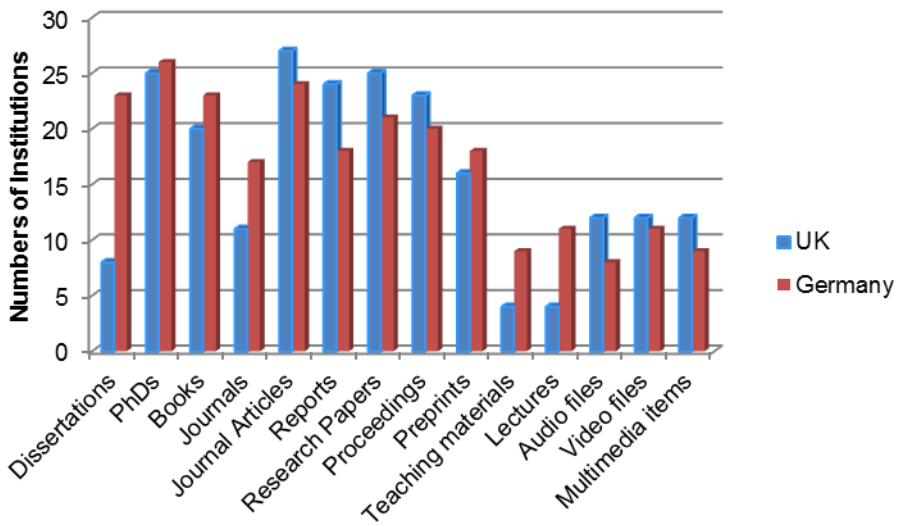


Figure 4.6: Published Document Types

Additionally, the following document types were named in the questionnaires.

UK	Germany
Theses – sometimes in separate repositories and Exemplary Master Theses	Exemplary Student Final Papers
Any Item of Scholarly Work	Digitised Copyright Free Historic Collections
Working Papers	Series
Conference Papers	Annual Reports
Book Chapters	Research Data
Exhibition Catalogues	Cartographic Materials
Research Output	Images
Software and Datasets	School Curricula
Images	Common Vocabulary for Publication and Document Types of the DINI Working Group Electronic Publishing
Open Educational Resources	Residents Registration Directories

Table 4.1: Additionally Named Document Types Published in Repositories

In addition to these results from the questionnaires the interviewees reported about the following topics related to the question about the change of document types as a result of institutional mandates.

Most of the interviewees with a mandate experienced no change of document types. This is also expected by most UK institutions without a mandate, except of Interviewee H who would hope to increase the amount of peer-reviewed documents by an institutional mandate.

> *'And I don't think that the type of items has changed significantly, to be honest. There's still mostly peer-reviewed journal articles …'* (Interviewee A)

> *'On the whole it was pretty much the same spread …'* (Interviewee B)

> *'In terms of types of documents, I suppose I'd hope to have more published peer-reviewed stuff. So, obviously that's what I really hope to get into the repository …'* (Interviewee H)

In contrast, Interviewee D described a change of document types within their thesis-only mandate.

> *'Also within some theses there are other types of files. We ask for a PDF of their thesis, but sometimes within the Music Department or within the Art Department we are supplied with musical compositions or videos, movie transcripts, … and so we are starting to see an increase in the types of formats that the repository is being asked to make available.'*

In Germany, again, the situation is different as there are mainly PhDs published in IRs and so the interviewees stated that they would expect an increase of the variety of document types in their repositories due to a mandate.

> *'With a mandate the composition of document types would change significantly as at the moment in Germany mainly PhDs are published in the repositories.'* (Interviewee N)

4.3.4 Mandated Document Types in the UK

Figure 4.7 below illustrates that in the UK PhDs and journal articles are the main mandated documents types.

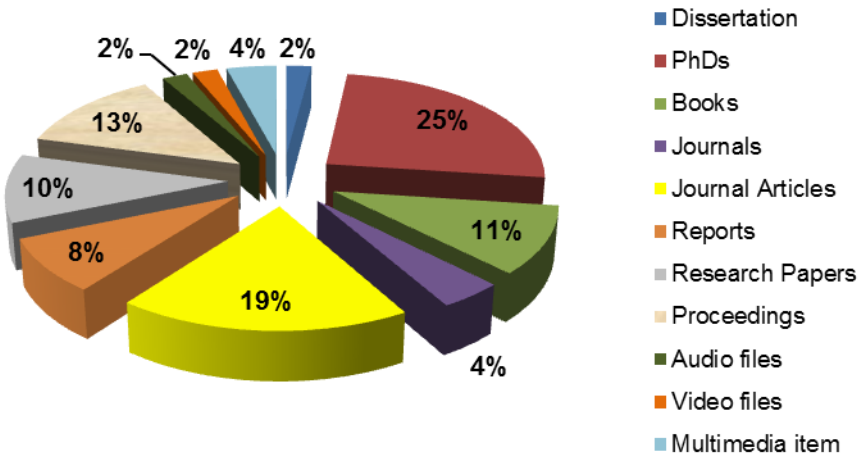


Figure 4.7: Mandated Document Types in the UK

Notes made under the point “Others” in the questionnaire are “all research outputs” and “separate theses mandate”.

4.4 Enforcement of Mandates

The enforcement of institutional OA mandates was assessed completely differently in both countries and from institutions with a mandate and those without a mandate in the UK.

In Germany all interviewees do not believe that a mandate is enforceable due to legal reasons as Interviewee N stated.

> *‘As far as I know it is impossible to implement a mandate because of the Copyright Law and other legal issues opponent to a mandate, for example the academic freedom as part of the German constitution.’*

4.4.1 Characteristics of Mandates

The characteristics of mandates and their effectiveness are appraised differently. However, both groups in the UK, with a mandate or without, acknowledged the fact

that the implemented mandates are not enforced but used as back-up and encouragement tool.

> *'I know anecdotally that even the institutions with mandates struggle to enforce that. It's called a mandate and it's not.'* (Interviewee H)

> *'Considering the other methods that are used alongside the mandate and … Just basically, obviously our figures have increased and the repository is growing quite significantly since we introduced the mandate. But I think a lot of that is bound to other things that we've been doing as well, such as going out and speaking to … and educating our researchers about the whole open access initiative. I'm not sure that a mandate on its own makes very much difference but when it's used alongside encouragement, then I think the mandate basically backs up everything that you're saying.'* (Interviewee A)

> *'It's a bit like the Funding Councils. They've not laid down mandates, they've laid down very strong encouragements …'* (Interviewee C)

Institutions in the UK with a mandate reported that they do not enforce their mandate strictly but emphasis the education of staff and a slow cultural change.

> *'We don't actually police this anyway at the moment, because to be honest, there isn't an easy way to police it.'* (Interviewee B)

> *'It's been more about encouragement than an actual enforced policy.'* (Interviewee A)

> *'One part of our internal mandate is that it's the researcher that has to do the deposit or they can delegate it to somebody else. But they are involved. The benefit there is the engagement with the researcher to encourage that cultural change. We were looking for cultural change and engagement with the researchers.'* (Interviewee B)

Some institutions even avoid to name their institutional mandate a mandate but prefer to use the expression policy. Although, the expression mandate actually includes an element of requirement as described in section 2.7, asked in the questionnaires if they have a mandate they replied positive. Thus, there were ambiguous views about the definitions of mandates and policies.

In opposition to this approach UK institutions without a mandate are convinced that a mandate has to be enforced but also recognised their modified use.

> *'For me it's what a mandate does. It tells people, that's what you have to do.'* (Interviewee J)

> *'I think mandates be very different things than they were actually released.'* (Interviewee I)

The enforcement of theses-only mandates appeared to be a lot more easier as Interviewee O described.

> *'The student has to submit an electronic copy to the library before they can graduate. So, in that sense it is enforced. Because, unless they submit an electronic copy we don't update their record and they will not appear on the graduation list. So, in that way, it's controlled and it's linked in from the library to students' records.'*

Although, this procedure sounds straight forward there are also exceptions as further stated from the same Interviewee.

> *'Having said that, that doesn't mean that the student has to put it on open access. Choice about restricting access in some ways replicates the printed environment in which we work. Or they can go for a full embargo. But they can only go for a full embargo for a period of time and it has to apply to the paper copy as well. So in that way the mandate is enforced but there is some recognition that we wouldn't make them make it openly accessible in all cases.'* (Interviewee O)

Interviewee K raised the question if it is even a governmental decision rather than of universities.

> *'I'm wondering whether it has to be kind of some sort of government enforcement.'*

Interviewee J also considered a responsibility of the Research Councils and their funder mandates as models and tool to apply pressure.

> *'If the Research Councils with their ability to withhold money don't enforce it then frankly institutions aren't going to …'*

4.4.2 Ways of Enforcement

Asked about possible ways of enforcement of institutional mandates interviewees from institutions with a mandate replied, as stated above, that they not strictly enforce it and that they use a softer approach.

Some institutions in the UK without a mandate do actually take the same approach to persuade people to upload their documents into the repository as described below by Interviewee J.

> *'It's the only database of research information of this sort, of research output in the university and if researchers don't tell us about what they have produced then they don't get credited with that in the University's Annual Research Report.'*

However, in general, it can be said that most institutions without a mandate think that a mandate can only be enforced by some sort of sanctions directly connected to academics' interests.

> *'There got to be some sort of consequence. We said that if the research doesn't get added than it won't necessarily be considered for the REF. That's obviously not a mandate, we haven't said, you have to add it. That is a very good way of persuading people that it should be in there. … Enforcement is the difficult bit.'* (Interviewee K)

> *'The only way of enforcing it is to tie in with some sort of performance review process and to have panelties or lack of progression if people don't do that, …'* (Interviewee J)

4.4.3 Legal Issues

The legal issues opponent to an institutional mandate, especially for full-text mandates, include in Germany mainly the Copyright Law, the academic freedom as part of the constitution, excluding a publishing duty as well as the competition with publishers.

> *'There are other issues avoiding a mandate. For example, publishers who secure themselves the exclusive rights for publications, issues of co-authors who are not at the same university, and the still open question if the freedom of publishing belongs to the academic freedom.'* (Interviewee L)

Issues with publishers also play a role in the UK as Interviewee I described.

> *'… so if there was a mandate for the whole University and if it was very strictly controlled it could actually restrict some of the publishing venues that academics and researchers can make themselves available of because they would have to be more aware of what publishers would allow them to do. If they wanted to make full-text available in a repository environment too, it could have a negative effect because there are some high profile journals, high profile publishers that would be very reluctant to allow that … , even draft versions of the material … which may affect the way we work, research has been ….'*

4.5 Researchers' Perceptions

To understand researchers' perceptions of and reservations against institutional mandates their working environment has to be included. Firstly, there is the loyalty of researchers mentioned by interviewees from the UK. Interviewee H felt that there is often higher loyalty to the subject of research than to the institution the researcher works for and Interviewee F added a cultural component to this experience.

> *'We've got the perennial problems with researchers perhaps of all. They're loyal to their subject rather than the institution in the UK.'* (Interviewee H)

> *'I think this is very much a cultural thing. I think a lot of our academics feel much more loyal to their subject and to their work than to the university. … so they quite often don't feel any particular loyalty to the institution. … If you want British people to do something, you have to express it if there is an element of choice involved, even if there isn't'* (Interviewee F)

Secondly, almost all interviewees reported about the experience or believe that researchers feel or would feel limited in their academic freedom as well as assessed by the mandate. The feeling of being assessed is not totally untrue for these institutions using their repository and mandate for the REF. Below are some exemplary replies from different interviewees concerning this common experience, although Interviewee G added that it probably will be a temporary problem only.

> *'Mandates are mainly wanted by repository managers not from researchers, because they want to keep their academic freedom and not even want to be forced to republish it in the repository. That is even the case for supporters of*

the OA initiative amongst researchers. They want to keep it voluntarily.' (Interviewee N)

'Academics kind of feeling pressurised at their research and that perception of the University is kind of interfering with their research project …' (Interviewee K)

'Mandates can be misinterpreted and they will be, and that creates barriers. They are seen as an exam and they don't like being assessed by people that they feel are not qualified to assess them. But of course, academics feel highly individuals and widely so and they see interference at that level as exactly as that as interference in terms of their career and in terms of their developments. … But actually overall though the fact you got that engagement, that level of engagement, people accept and do get over it. They get used to it. It takes a year or two, they forget that and then crack on. And then just do it. And they won't complain about it because they just got into that cycle. So there are short-terms, median-terms negatives in that respect, but I think they're not the long-term negatives and that the benefits will rocked by those.' (Interviewee G)

The perception of researchers that a mandate is an interference with their academic freedom is also thought of a negative effect on the institution as a whole by Interviewee N and used as justification for the previously described softer approach as stated, for example, by Interviewee J.

'If it would be possible that a university could implement an institutional mandate they would have probably a lot of discussions with the researchers. So it would probably not be good for the diplomatic climate of the university.' (Interviewee N)

'… as a general rule the resistance among sort of the academic community to be told what to do by the centre. … sort of arguments of academic freedom and all that sort of things. I'd rather encourage than force people to put stuff in there.' (Interviewee J)

On the other side, some interviewees from institutions with a mandate stated that despite all the problems connected to the implementation of a mandate it also helped to increase researchers' engagement with the repository and the mandate.

'It has helped to increase engagement with the repository, but only to a small degree.' (Interviewee F)

Thus, there are some reservations against an institutional mandate from researchers' side which admittedly appear to be reduced after a time within a learning process and familiarisation with OA, repositories, and mandates.

4.6 The Role of Funder Mandates

Funder mandates are recognised as a positive development in achieving the OA goal to make publicly funded research publicly available and also appreciated to be role models for institutional mandates. Although, the interviewees expressed that the funder mandates do not have a direct influence on the content of their institutional mandate.

> *'But clearly be recognised at the university is the importance of funder mandates and I think that a high level within the university recognise the importance of open access and transparency in research or all those things.'* (Interviewee G)

> *'But I imagined that the fact that more funders introducing mandates did have an effect on the decision that we should introduce it as well.'* (Interviewee A)

> *'It is not influencing the institutional mandate directly, but the more funder mandates the more it becomes widespread, the more usual it becomes the less difficult it will be to introduce an institutional mandate.'* (Interviewee L)

Some interviewees experienced different reactions of academics towards funder mandates than institutional mandates, so that funder mandates can actually help to reduce reservations.

> *'… funder mandates possibly have more weight with academics to the institutional ones … … certainly an enforced funder mandate where they're monitoring compliances and using that in kind of determine future funding and so forth. Funder mandates have a little more weight here because they actually tying in to the things that the academics are directly interested in.'* (Interviewee I)

> *'And obviously we have a number of students who are funded by particular Research Councils who in turn are keen that the work that they are supporting is more openly accessible.'* (Interviewee D)

Therefore, funder mandates are used as part of the advocacy work regarding the IR and institutional mandate outlining how the repository can be used to fulfil the demands of the funder mandates as Interviewee A described as follows.

> *'I would say the funder mandate is something that we use more when we're advocating the repository and we explain to academics how the repository can help them satisfy funder mandates.'* (Interviewee A)

However, Interviewee B added, as only institution, that a funder mandate does not mean that the institutional mandate has not to be fulfilled by researchers, what most other institutions do not require.

> *'…when I promote it I'm always sort of mentioning by the way this is over above any funder mandate, … just don't assume just because your funder requires, you've done the job, it's your university that requires you to do it as well. … so I promote both kinds of mandates …'* (Interviewee B)

> *'The people who published in open access journals and then we put a copy in the repository for them and so we take that as kind of enough commitment to open access … The same question by the subject repositories as well.'* (Interviewee F)

On the other side, there was also criticism of funder mandates mainly because they are not strictly enforced likewise the institutional mandates. In general, the funders have to manage the same problems as IRs of institutions with a mandate, for example, copyright issues.

> *'Probably 80% of the University's researchers agree with the principles of open access but don't practice it. … I think it's fair to say funder mandates at the moment, they are mandates, but they have no teeth, they're not enforced… I think there is general agreements with the principles the funders are promoting. It is the practicality and logistics of giving that information down to a level of an individual researcher, so they can make those informed and sensible decision.'* (Interviewee G)

> *'I'm not sure how enforced they are by the funders. Whether the Arts and Humanities Research Council necessarily enforce it and they play perhaps second fiddles to some extend to the copyright holders and it will depend on the copyright permissions given by Elsevier …'* (Interviewee H)

Interviewees K and O even raised the question of dependency of funder and institutional mandates. If funder mandates are enforced are the institutional mandates still necessary or the other way round if every institution has an institutional mandate are funder mandates still necessary.

> *'But then I don't know, if you've got those other mandates in place does it mean an institutional mandate is less necessary because researchers are adhering to different ones.'* (Interviewee K)

> *'I think, at the moment funders want to promote open access through their mandates. But if there is an institutional mandate the funder mandates wouldn't be necessary anymore.'* (Interviewee O)

4.7 Technical Issues

The question of a need to adapt their technical environment to deal with the mandate was answered equally with yes or no from all groups of interviewees. There were different experiences, opinions, and approaches related to such an adaption. Some interviewees did not experience a need for any changes at all (Interviewee A), others experienced no need of adaption so far as their repository and mandate are relatively new (Interviewee C).

> *'We were already able to cope with the numbers. So no, I wouldn't say that we made any changes as result of the mandate.'* (Interviewee A)

> *'Actually, the mandate came in, to say almost exactly the same time as we went live with the repository. So we didn't have to adapt.'* (Interviewee C)

There were some interviewees who experienced a need for technical change and improvement after a time often connected to the implementation of a Current Research Information System (CRIS; Interviewee B). Others just thought that technical changes and improvements are part of their routine maintenance and therefore not directly connected with the mandate (Interviewee E), and others again did expect a need for technical adaption for certain types of data, for example, research data (Interviewee L).

> *'At the time when we launched the mandate, no. On the back of the mandate of course, now we've gone down getting a CRIS system … and linking that to the*

repository, … we actually have to upgrade our software. Yes, after two years we‘ve had to adapt it.’ (Interviewee B)

‘… we’re constantly looking of ways to improve the process and we are trying out … that’s a way to make it more attractive for researchers to deposit. They have control over their own sort of profile page within the repository and they can upload from their page. … That’s the idea.’ (Interviewee E)

‘One topic would be research data. This would be a new field which would require different technical equipment components.’ (Interviewee L)

One topic that occurred in this field is the importance of making it easy and attractive for researchers to deposit their research as well as making the use of these data and documents attractive through technical improvement.

‘But there should be changes on side of the working place of the researchers. It would be good if there would be a connection from their workplace, their desktop to the repository – keyword easy deposit – because uploading is still a problem as researchers feel that this is too complicated. So the goal should be to minimise manual work. Therefore, there would be more work to do on the repository software itself.’ (Interviewee N)

‘Also things like doublet check or things that make it more attractive to researchers like an export function to subject repositories, and to make it easy to deposit, maybe also offer a user profile. That would be important.’ (Interviewee O)

‘At the moment we can host videos but we then literally just file them and we would push them into the repository, where people have to download them to actually play them. … If we wanted actually expose that material in a really attractive and useful way we will need to go further with the technical development on the repository itself.’ (Interviewee I)

4.8 Staff Requirements

The question if more staff were required was mostly positive answered with the exception of institutions with a thesis-only mandate and where academics have the possibility to manage their data and documents through an account by their own.

'So with the electronic theses it is the same number of staff. I suppose what it does, has done, it slightly added to the amount of work they have to do in order to process the theses because they're processing both the print and an electronic version.' (Interviewee C)

Interviewees from institutions without a mandate from both countries would expect an increased need of staff as well. Mainly added, directly linked to the implementation of the institutional mandate, was the position of a repository manager and in some cases further assistance.

'The new position was a repository manager position.' (Interviewee A)

'Yes, a full-time repository manager and another information assistant who works part of her time on the repository where required …' (Interviewee F)

Others reported about a temporary increase of staff when needed or through timely limited project teams what resulted in difficulties to clearly name a certain amount of staff increase and position.

'Staff were required, but you not necessarily get them. But in fact, we went up. We now have two and a half members of staff with some help that we request when it comes to the deadlines for thesis submission … We ask for more help and occasionally we get it, for a week or so, but not quite as long as we would like.' (Interviewee D)

'Yes and no. We had a project team to build it up and implement the repository and when we launched the repository parts of that team keep contracted but in sort of it all overlapped a little bit.' (Interviewee G)

Higher workload, including thorough metadata and copyright checks, more enquiries, and more advocacy work are named as reasons for higher staff requirements. Though, the advocacy work appeared to be the main task and responsibility of the repository manager.

'I think you would need more staff because there would be more documents and they needed to be processed and certainly we would need to advise more authors.' (Interviewee M)

'If we carry on doing things the way we currently do, then I might say yes. We probably would need more staff because at the moment we check every single entry we get. We check all the kind of metadata, we check all the copyright.

There would be a need for more staff just to do the kind of day to day things like that.' (Interviewee K)

'… the new position that was put in place was a repository manager position. The main responsibility of this position is the advocacy of the repository and the development of policies and of the system itself. But I would say by adding the manager's position it gave the other members of staff more time to be able to do the administrative work that is involved, cause that did increase as well.' (Interviewee A)

Only Interviewee A stated that they do not think that the increase of staff was directly linked to the mandate but to a general growth of the repository.

'The repository staff was increased soon after the mandate was introduced. Again, I wouldn't say that that was a direct result of the mandate. I think the repository was growing generally at that point anyway. But obviously the mandate adds to that.' (Interviewee A)

4.9 Other Issues

Other issues suggested by interviewees as related topics to institutional mandates and considered as important are the following topics which could not or not extensively be covered in this research project.

- The discussion about the so-called Gold and Green Way of OA, their benefits, and which of them is the best way.
- Issues related to Copyright and Intellectual Property Right.
- The effects of repositories on other library services like the inter-library loan service.

4.10 Summary

There are clear differences in the development of repositories and mandates in the UK and Germany, with more mandates being implemented in the UK. The limited adoption of institutional OA mandates in Germany is mainly caused by legal issues.

Initiatives to implement mandates in the UK came from different stakeholders, but primarily from senior management of universities, libraries as host of the repositories but also from researchers and students who distinguished their advantages of OA publishing.

The main motivations underlying these initiatives were research impact also related to the REF and promotion of the institution through the increase of content, higher visibility, and increased citation rate.

Problematic for the comparison of the effects of mandates on repositories but also of the repositories between the two countries is the difference in published and mandated content, i.e. full-text and metadata records.

Although, the implemented mandates in the UK are not heavily enforced, they result in a higher number of published documents in general, but not in a great change of document types. The enforcement of mandates is often linked to the idea to connect it directly with researchers' interests and sanctions if they do not adhere to it. This idea contrasts the experience of the interviewee that most researchers do not want to be told what to do and therefore the approach of slow change is mostly taken by institutions.

Funder mandates do not influence institutional mandates directly but are used to back-up and promote it.

The technical and staff requirements are experienced differently by the institutions dependent on level of development of the repository and mandate as well as size and research intensity of the institution.

Chapter 5: Discussion

In this chapter some important issues that emerged from the results of this research are discussed and compared with findings in the literature and then related to the research question of the effects of institutional OA mandates on IRs delivery services.

5.1 Repository Content and the Implementation of Mandates

The definition of OA and what it is about is not fully common sense, although the proclamation of Bethesda as first proclamation of the OA development defines OA as the publication of the complete work[85], in other words full-text. The requirement of full-text publications is, as a result of the proclamation, widely common sense. Despite the proclaimed definition of OA including the full-text publication, the results of this dissertation show that there are great differences regarding the question of full-text and/or metadata storage between Germany and the UK but also between institutions with and without a mandate in the UK. All interviewees prefer full-text documents but many, especially institutions with a mandate, are satisfied with just the metadata of documents, particularly if they are strongly focusing on the data collection for the REF. The approach of storing metadata raises the question if this is still OA as the actual text is not publicly accessible. Thus, the interviewees use their own definitions of OA that can vary widely.

Steve Harnad, a well-known researcher and strong supporter of the green way of OA and mandates, claims that OA IRs are, especially regarding a mandate, about peer-reviewed journal articles, published at an academic publisher and at the same time in the IR.[86] The Study of Open Access Publishing (SOAP) also emphasises peer-review in their definition of OA journal articles.[87] The importance of peer-reviewed articles is based on their proved quality standards through the peer-review process and as a result of this their ability to improve the research impact of an institution. The ability to raise the research impact , what is one of the highest goals of HEIs, makes peer-reviewed journal articles the most wanted document types for IRs according to the interviewees. Despite this preference institutions mandate other document types like PhDs and proceedings as well.

[85] Ref. 6.
[86] Harnad, ref. 42, p. 36.
[87] Dallmaier-Tiessen, ref. 41, p.2.

5.2 Motivations for Implementing Institutional OA Mandates

The motivation for the implementation of an institutional OA mandate found in current literature are the increase of OA items in the repositories, the increase of visibility and citation rates resulting in greater research impact[88] and more funding.[89] These motivations are identical with those of the results of this research project, whereas at the moment most of the institutions are strongly focusing on REF submittable documents. This approach supports the original goals of raising research impact and funding, as the REF includes the evaluation of citation rates and a success in the assessment confirms a high research impact and can increase funding. Independent of what the motivation is or who the initiators are, it is important to convince the senior management of the institution and gain them as supporters to raise the probability of recruiting material into the repository. The reason for this dependency is that a mandate which is actively supported and advocated by senior management has more weight by academics. The support of the senior management can also be very helpful regarding the work environment of the repository as they can introduce control mechanisms and may also influence decisions concerning technical issues and the fulfilling of staff requirements. Another reason for the implementation of institutional OA mandates noted in the literature, especially by supporters of institutional mandates, is the argument that the advocacy of IRs alone by libraries and institutions are not very successful without the support of a mandate.[90] The data collected for this dissertation also show that the institutions with a mandate all together have almost double as much items in the repositories than the institutions without a mandate. Additionally, some interviewees reported about an increase of documents directly after the implementation of the mandate. Thus, the results of this research project seem to confirm the argument in the literature. However, the results indicate that most institutions actively started to advocate their IR after the implementation of the mandate, sometimes even by employing a repository manager with the main task of advocating the IR and the mandate. Hence, the open question is what has actually the greater share of the increase of items in the repository, as some institutions without a mandate which advocate their IR are also very successful in recruiting items. This ambiguity leads directly to the discussion of the significance of institutional OA mandates.

[88] Harnad, ref. 36, p. 39.
[89] Suber, ref. 21.
[90] Swan, ref. 31, p. 32.

5.3 Significance of Institutional OA Mandates

As discussed in the section above institutional OA mandates are often argued in the literature to be the only effective tool to increase OA publications in IRs.[91] It seems to be common sense in the literature that mandates are enforced in some kind, as for example Harnad argues that a mandate can raise the amount of published research output in an IR to 100 per cent,[92] although the expression enforcement is not explicitly mentioned. On the other side, the results of this research show that most institutional OA mandates are not strictly enforced and that institutions try to change slowly the way and habits of scholarly communication. Other interviewees even have doubts about the necessity of an institutional mandate to achieve this cultural change and judge them as contra-productive if enforced as they believe that enforcement results in more resistance against OA publishing by academics. Thus, the expression institutional OA mandate is not uniformly defined. It seems that there are three common definitions. Firstly, it can include a requirement of publication in the OA IR combined with sanctions if not adhered to it. Secondly, there can be a requirement for OA publications in the IR which is not enforced but supported by some kind of encouragement. This approach appears to be the mostly taken one in the UK according to the research results. At the same time this approach is also the mostly questioned one regarding the significance and necessity of institutional OA mandates questioning the usefulness of a unenforced mandate and because it is thought that in this case the encouragement is the important part. Thirdly, there are institutional mandates that just encourage OA publishing in the IR but not require it. In conclusion, an institutional OA mandate is not explicitly defined and that makes it difficult to actually make a statement about their effects on IRs. What can be said is that each approach changes the work environment of a repository. Enforcement needs to be controlled and encouragement has to be actively done, for example as advocacy work which shifts the work from administrative tasks to promotional tasks or add to the administrative work of checking and processing repository entries.

5.4 Researchers' Perceptions

There seems to be a great willingness of researchers to adhere to an institutional mandate.[93] Although the study of Creaser "Open access to research output" shows

[91] Swan, ref. 31, p. 32.
[92] Harnad, ref. 36, p. 39.
[93] Ref. 54.

that researchers often do not know about the existence of the mandate[94] or do not value it as an important reason for an OA publication.[95] In opposition, almost all interviewees reported about reservations against the mandate because academics perceive it as interference with their academic freedom. On the other side, they also confirm the previously mentioned survey results regarding the lack of knowledge about the advantages of OA and the mandate as well as the existence of such a mandate as a cause of reservations. These experiences also add to the necessity to advocate OA and the institutional mandate to academics and to convince them of the advantages of OA and institutional mandates. Again, there is a need to advocate an institutional mandate to actually let it become reality, which in turn has an effect on repository services.

5.5 Summary

In conclusion, there are great differences in understanding, defining, and the use of OA, IRs, and institutional OA mandates leading to opacity and misunderstandings, what in turn makes it more difficult to introduce a cultural change, not only on institutional level but also on national and international level. Independent of the different definitions and use of IRs and institutional mandates they have almost always an effect on IR services.

[94] Creaser, ref. 15, p. 8.
[95] *Ibid*., p. 18.

Chapter 6: Conclusion and Recommendations

This chapter provides a conclusion and reflection of the research questions, aims, and objectives as well as recommendations for the successful implementation of an institutional OA mandate.

6.1 Conclusion

The first aim of this research project was to explore the implementation of IRs and institutional OA mandates in HEIs in Germany and the UK. This aim was achieved by online questionnaires, although, the response rate was not high enough to be representative. The results give a clear indication of differences in the history of development of IRs and the spread of institutional mandates in these countries. The great difference in the numbers of implemented institutional mandates, with almost none in Germany, is mainly caused by legal restrictions. As HEIs and in particular researchers are in competition internationally, it would be interesting to explore in a future research project if an institutional OA mandate is an advantage in recruiting funding. Even though, researchers and HEIs within a country and outside are competitors, they are also working together and have the common aim to add to human knowledge. Therefore, it would be desirable to find an at least European agreement with academic publishers that allows an immediate OA publication of all research output in IRs to accelerate the dissemination and further dynamise the research world.

The second aim was the exploration of experiences, opinions, and expectations of IR managers towards the effects of institutional OA mandates on their IR services. The conducted semi-structured interviews provided a huge amount of data that enabled the researcher to understand the complex dependencies regarding an institutional OA mandate and its effect on IR services. The main issues, concerns, and problems are:

- Motivation

  It is important to think about the aims of the implementation of an institutional mandate, for example, the increase of citation rate and to market the institution, as these aims are the basis for what is needed regarding the content of the repository, the characteristics of the mandate as well as technical and staff requirements.

- Repository content

  Directly influencing the work process and amount of work is the decision about what document types are mandated, the requirement of full-text or metadata records, and the service provision like metadata and copyright checks. It is difficult in context of the discussion about OA full-text or metadata storage to find agreement about what OA actually means. The different views and opinions make it difficult to communicate clearly without an explanation how each person understands OA. Therefore, the development of common vocabulary would be useful not only for the daily work and exchange of information and experiences of repository staff but also for further research projects.

- Characteristics of institutional OA mandates and enforcement

  Again, the different definitions of institutional mandates as enforced mandates, mandates with a publishing requirement but no enforcement, or mandates as encouragement tool result in difficulties in comparing data and in communicating with each other. Therefore, a uniform definition of institutional OA mandates would be supportive and would probably change the number of real institutional OA mandates if the definition includes enforcement and the requirement of OA publications in IRs in full-text. Even though, there are doubts that this approach would be the right and most effective way to achieve a change in scholarly communication but results in more resistance. Regarding the services delivery of IRs all these variations of institutional mandates have effects on them. Enforced or unenforced, the advocacy of OA in general and the institutional mandate is necessary and therefore mostly more staff is required. A strict enforcement additionally needs control mechanisms that can result in a higher staff requirement and/or a need for technical change. In any case, repository staff have to understand and respond to researchers' perceptions of OA publishing and institutional OA mandates including uncertainties due to the opacity of publishers' attitude and regulations towards OA publishing and institutional OA mandates.

The third aim was a comparison of the differences and commonalities between the UK and Germany regarding the IR landscape of HEIs. This aim could only be achieved partially. The comparison of the development and characteristics of repositories was unproblematic. Due to the fact that there are only a few institutional OA mandates in Germany and these institutions were not willing to participate in the

interviews, the comparison regarding the effects of institutional OA mandates on IRs could only be done about the expected effects of such mandates by institutions without one.

6.2 Recommendations

Based on the views, experiences, and problems discussed in this dissertation and highlighted above, the following steps are recommended to successfully implement an institutional OA mandate and to achieve the goals underpinning that implementation.

1. Decide what the repository is for and how it is used, for example as part of a research information system or the exclusive storage of full-text documents, to assess the requirements regarding software and staff as well as work process.

2. Clearly define the characteristics of the institutional OA mandate, for example, enforcement or no enforcement and how it will be followed through.

3. Communicate the existence and content of the institutional OA mandate in an easy and understandable way to all academics to avoid confusion and increase knowledge of its impact on and advantages for researchers.

4. Support the institutional OA mandate and its goals through additional services like advocacy work, for example presentations, and enhance, for example, the visibility of the repository content by cataloguing repository items into the library catalogue.

Overall, the implementation of an institutional OA mandate should be a well thought-through decision process including the requirements of IRs to deliver and successfully realise an institutional OA mandate to avoid disappointment and discouragement by ineffective services delivery.

All in all, this research project explored a complex part of the OA publishing field that was neglected so far by researchers but may be useful for institutions considering the implementation of an institutional OA mandate.

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Appendices

Appendix 1: English Questionnaire

Impact of Institutional Open Access Mandates on Institutional Repositories

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This survey collects data about Open Access Institutional Repositories and Institutional Open Access Mandates as part of a postgraduate research project examining the impact of Institutional Open Access Mandates on the work of Institutional Repositories. An Institutional Open Access Mandate is defined as an official policy of an institution whereby research staff are required to place a copy of their publication, or other material, into their institution's Open Access Repository.

The data collected via this survey will be treated with confidentiality and will only be used for the purpose of my postgraduate research project. Thank you very much for participating in this survey.

1.) Does your Institution have an Open Access Institutional Repository?

( ) Yes

( ) No

If you answered No, please go to question no. 11.

2.) Since when did you have an Open Access Institutional Repository?

Please state month and year.

_____

3.) How many documents are stored in your Institutional Repository at the moment?

_____

4.) What kind of material is held in your Institutional Repository?

Tick as many boxes as apply.

[ ] Dissertations

[ ] PhDs

[ ] Books

[ ] Journals

[ ] Articles

[ ] Reports

[ ] Research Papers

[ ] Proceedings

[ ] Preprints

[ ] Teaching materials

[ ] Lectures

[ ] Audio files

[ ] Video files

[ ] Multimedia items

[ ] Others (please specify)

5.) Is there an Institutional Mandate?

( ) Yes

( ) No

If you answered No, please go to question no. 8.

6.) When did your Mandate become active?

Please state month and year.

_____

7.) Which of the materials below are mandated?

Tick as many boxes as apply.

[ ] Dissertations

[ ] PhDs

[ ] Books

[ ] Journals

[ ] Articles

[ ] Reports

[ ] Research Papers

[ ] Proceedings

[ ] Preprints

[ ] Teaching materials

[ ] Lectures

[ ] Audio files

[ ] Video files

[ ] Multimedia items

[ ] Others (please specify)

Please go on with question 10.

8.) Does your Institution have plans for the implementation of a Mandate?

( ) Yes

( ) No

If you answered No, please go to question no. 10.

9.) Which of these materials are planned to be mandated?

Tick as many boxes as apply.

[ ] Not known yet

[ ] Dissertations

[ ] PhDs

[ ] Books

[ ] Journals

[ ] Articles

[ ] Reports

[ ] Research Papers

[ ] Proceedings

[ ] Preprints

[ ] Teaching materials

[ ] Lectures

[ ] Audio files

[ ] Video files

[ ] Multimedia items

[ ] Others (please specify)

10.) Would you be willing to be contacted for a short follow-up interview based around these questions (conducted either face-to-face or by phone/skype)?

( ) Yes

( ) No

11.) If you are willing to be contacted for an interview and/or interested in the results of this survey, please enter your email address here.

_____

Appendix 2: German Questionnaire

Auswirkungen von Mandates auf Institutionelle Repositorien

Diese Umfrage is Teil einer Masterarbeit, welche die Auswirkungen von Institutional Open Access Mandates auf Institutionelle Repositorien untersucht. Der Begriff „Institutional Open Access Mandate“ ist folgendermaßen definiert: Eine offizielle Verpflichtung aller Institutsangehörigen zur Veröffentlichung ihrer Artikel und sonstigen Forschungsleistungen im von der Institution betriebenen Open Access Repositorium.

Alle Daten dieser Umfrage werden vertraulich behandelt und nur zum Zweck der Masterarbeit verwendet. Vielen Dank, dass Sie an dieser Umfrage teilnehmen.

1.) Hat Ihre Institution ein Institutionelles Open Access Repositorium?

( ) Ja

( ) Nein

Wenn Sie diese Frage mit Nein beantwortet haben, fahren Sie bitte direkt mit Frage 11 fort.

2.) Seit wann ist das Institutionelle Open Access Repositorium aktiv?

Bitte geben Sie Monat und Jahr an.

_____

3.) Wie viele Dokumente befinden sich derzeit in Ihrem Repositorium?

_____

4.) Welche Arten von Materialien werden in Ihrem Repositorium veröffentlicht?

Bitte alle zutreffenden Materialien markieren.

[ ] Bachelorarbeiten

[ ] Masterarbeiten

[ ] Dissertationen

[ ] Habilitationen

[ ] Bücher

[ ] Zeitschriften

[ ] Artikel/Aufsätze

[ ] Reports

[ ] Research Papers

[ ] Tagungsberichte/-bände

[ ] Preprints

[ ] Lehrmaterialien

[ ] Vorlesungen

[ ] Audiodateien

[ ] Videodateien

[ ] Multimediale Einheiten

[ ] Sonstige (Bitte erläutern Sie)

5.) Ist eine institutsbezogene Veröffentlichungspflicht (Institutional Mandate) vorhanden?

( ) Ja

( ) Nein

Wenn Sie diese Frage mit Nein beantwortet haben, fahren Sie bitte direkt mit Frage 8 fort.

6.) Seit wann ist diese Verpflichtung aktiv?

Bitte geben Sie Monat und Jahr an.

_____

7.) Für welche dieser Materialien besteht eine Veröffentlichungspflicht in Ihrem Institutionellen Repositorium?

Bitte alle zutreffenden Materialien markieren.

[ ] Bachelorarbeiten

[ ] Masterarbeiten

[ ] Dissertationen

[ ] Habilitationen

[ ] Bücher

[ ] Zeitschriften

[ ] Artikel/Aufsätze

[ ] Reports

[ ] Research Papers

[ ] Tagungsberichte/-bände

[ ] Preprints

[ ] Lehrmaterialien

[ ] Vorlesungen

[ ] Audiodateien

[ ] Videodateien

[ ] Multimediale Einheiten

[ ] Sonstige (Bitte erläutern Sie)

Bitte fahren Sie mit Frage 10 fort.

8.) Plant Ihre Institution eine Veröffentlichungspflicht einzuführen?

( ) Ja

( ) Nein

Wenn Sie diese Frage mit Nein beantwortet haben, fahren Sie bitte direkt mit Frage 10 fort.

9.) Für welche dieser Materialien soll die geplante Veröffentlichungspflicht gelten?

Bitte alle zutreffenden Materialien markieren.

[ ] Noch nicht bekannt

[ ] Bachelorarbeiten

[ ] Masterarbeiten

[ ] Dissertationen

[ ] Habilitationen

[ ] Bücher

[ ] Zeitschriften

[ ] Artikel/Aufsätze

[ ] Reports

[ ] Research Papers

[ ] Tagungsberichte/-bände

[ ] Preprints

[ ] Lehrmaterialien

[ ] Vorlesungen

[ ] Audiodateien

[ ] Videodateien

[ ] Multimediale Einheiten

[ ] Sonstige (Bitte erläutern Sie)

10.) Die Ergebnisse dieser Umfrage sollen durch Interviews weiter untersucht werden. Sind Sie grundsätzlich bereit an solch einem Interview (wahrscheinlich durchgeführt am Telefon, Skype o.ä.) teilzunehmen?

( ) Ja

( ) Nein

11.) Wenn Sie sich für ein Interview bereit erklärt haben und/oder an den Ergebnissen dieser Umfrage interessiert sind, tragen Sie bitte hier Ihre E-Mail-Adresse ein.

_____

Appendix 3: Interview Schedule English

Preamble:

- Thank for participation.
- Allow recording?
- Treatment of data.
- The aim of interview
    - Explore effects of mandates on institutional repository through the examination of experiences.
- Interview structure and time.
    - Motivation
    - Scope of mandate and repository service
    - Factors important to working environment and service delivery
    - Influence of institutional mandates on institution and repository
- Any questions to the procedure?

Motivation

1. What was your motivation to implement the mandate?
2. How did you come to that stage?

Scope of mandate and repository service

3. Where there any changes in types and number of published documents in your repository after the implementation of the mandate? If yes, what kind of changes?
4. How is the mandate enforced and what role do you play within the enforcement?

5. To what extend is your mandate influenced through other mandates, e.g. Funder Mandate?

Factors important to working environment and service delivery

6. Did you have to adapt your technical working environment to cope with the mandate? If yes, what had to be adapted?
7. Were more staff required? If yes, what for?

Influence of institutional mandates on institution and repository

8. What benefits of having a mandate did you recognise concerning the whole institution?
9. What benefits of having a mandate did you recognise concerning the repository?
10. On the other side what negative effects of having a mandate did you recognise concerning the whole institution?
11. What negative effects of having a mandate did you recognise concerning the repository?

Comments

12. Are there any questions you think I should have asked?

- Allow to quote by name, institution?
- Can contact me, withdraw any time, thanks again.

Appendix 4: List of Labels for Interviewees

Interviewee	Mandate	Country
A	Yes	UK
B	Yes	UK
C	Yes	UK
D	Yes	UK
E	Yes	UK
F	Yes	UK
G	Yes	UK
H	No	UK
I	No	UK
J	No	UK
K	No	UK
L	No	Germany
M	No	Germany
N	No	Germany
O	No	Germany