D5.2

Operational course and education material registry

Document information

Title	Operational course and education material registry
ID	CLARINPLUS-D5.2 (CE-2017-0986)
Author(s)	Barbara Safradin (CLARIN ERIC)
Responsible WP leader	Franciska de Jong (CLARIN ERIC)
Contractual Delivery Date	2017-02-28
Actual Delivery Date	2017-02-28
Distribution	Public
Document status in workplan	Deliverable

Table of contents

1 Executive Summary

This deliverable describes the steps taken so far in the context of WP5 - Subtask T5.2.2 towards a sustainable registry of courses and other educational material related to the use of digital language resources and tools in Humanities and Social Science research (hereafter: SSH).

The objective of the actions taken was an online platform and underlying information system that provides a searchable registry with information on courses and courseware for the digital humanities across Europe, under the heading 'DH Course Registry'. The registry realized is to provide information to: (i) *students and researchers* who intend take up a study in the field of Digital Humanities, (ii) *lecturers* who are looking for examples of good practices in the DH field or want to promote their own DH-related teaching activities and material, and (iii) *administrators* who aim to facilitate staff mobility and exchange across borders.

A beta version of a course registry developed under the auspices of DARIAH was used as a starting point for the re-installation realized with the support of CLARIN-PLUS. The current registry is a joint initiative of CLARIN and DARIAH. It is to be viewed as a living project: the current platform is a stepping stone towards the creation of a rich resource. The content that has been ingested thus far, is limited, but the ingest of new information will start in the course of 2017, and where needed the platform will be adjusted to the needs of users and the dynamics in the offer of courses and educational materials stimulating digital scholarship in SSH.

2   Introduction

For scholars in the humanities and social sciences who want to educate themselves in digital scholarship, as well as for the educators of scholars in the various SSH fields, there is a strong need to find out which courses and educational materials involving digital data and/or services already exist that could be a source of inspiration for new educational tracks or the starting point for the development of new materials. In addition this type of information is relevant for administrators who facilitate staff mobility and exchange.

In the context of a pilot project that was carried out in 2014-2016, funded by CLARIAH (DARIAH_NL) under the heading DODH[1], and executed by the Erasmus Studio, Erasmus University Rotterdam, in collaboration with Utrecht University and KNAW (DANS and eHumanities group), and supported by developers from CLARIAH Austria, an online platform and underlying information system was designed in order to provide a searchable registry with information on courses and courseware for the digital humanities across Europe. For the course information collected, a data model was defined that would support easy access and maintenance. During the pilot phase relevant entries for the database were collected in several countries, and to demonstrate the potential impact a beta-version of the DH Course Registry was presented at several DH-events. Based on an internal evaluation of the beta-version of the platform, recommendations for adjustments were collected and in 2016 a plan was developed for a revised implementation, to be combined with a migration of the DH Course Registry platform to the Austrian Academy of Sciences.

More or less at the same time CLARIN ERIC and DARIAH ERIC expressed their intention to initiate collaboration in the field of education and training. As the DH Course Registry concept was generally well received in the DARIAH community, and as the audiences addressed partly overlap within the target audiences that CLARIN-PLUS had identified as relevant, it was decided between CLARIN ERIC and DARIAH ERIC to start the envisaged collaboration with a joint investment in the further development of the DH Course Registry. A plan was developed for improvement of the functionality of the existing platform that would support the extension of the coverage and stimulate the inclusion of courses and educational material that serves the specific educational needs of the communities of use working with the kind of language resources that the CLARIN infrastructure is offering access to. A project team with representatives of both DARIAH and the CLARIN-PLUS team was installed to prepare the re-implementation. In addition a plan was designed for the communication towards the various communities. This also will involve a role of the country moderators that are supposed to collect and/or aggregate the information that should populate the database underlying the platform. These national moderators will be appointed by the respective National Coordinators of

---

[1] This pilot project was executed under the name DODH, which stands for Dutch Overview of Digital Humanities. DODH is a digital resource that aims to map teaching and research activities related to Digital Humanities in Europe. These activities have been initiated and are still ongoing in the Netherlands. The service offers a search environment that combines a map of Europe with a database that contains information on Digital Humanities courses and projects offered in European cities.

CLARIN and DARIAH, drawing on the pool of colleagues from both ERICs to increase the number of candidates and ensure the engagement of the national moderators to monitor courses on a regular basis (see the Appendix: *Crib Sheet for national moderators*).

This report describes the steps taken as well as the steps ahead, and is structured in the following way: in Section 3 the report summarizes the goals pursued with the platform, and gives an overview of the design and the current functionality. In Section 4, the adopted data collection and curation methodology is outlined, followed by an explanation of the metadata scheme used for the platform. An overview of the lessons learnt and the plans for future extensions are presented in Section 5. The report concludes with an overview of steps planned for the short term (Section 6).

3   Design and status of the DH Course Registry

The DH Course Registry offers a search environment that gives access to a database that contains information on Digital Humanities courses. Students, lecturers and researchers can search the database on the basis of *topographical information* (country, city*)*, *ECTS credits* or the *academic degrees* that are awarded. In addition it is possible to search for courses based on discipline-specific features. For this purpose the user interface is enhanced with filter options. The search functionality is also enhanced with an interactive map based on the topographical information associated with an information element.

The platform currently covers only a subset of DH courses offered across Europe. The future coverage will be more balanced in terms of geographical spread, and pointers to resources outside Europe may also be included. The Course Registry is to be viewed as a living project of the two ERICs that currently govern and monitor the platform: the data and functionality of the registry will continuously be adjusted to the needs of users and the dynamics in the offer of courses and materials.

The DH Course Registry is meant to be as inclusive as possible, but it will also be based on some very basic restrictions in order to keep the information in the database relevant for the envisaged audience and focused on the communities that are the target audiences of CLARIN and DARIAH:
- No basic *computer literacy* courses (e.g., courses that teach European Computer Driving license Courses, Office applications)
- No basic *information management* courses (e.g., courses at libraries on how to search literature/sources, ...)

Courses are supposed to offer a combination of *methods* and *content* from SSH and Computer Sciences/ICT. (Not suitable are for example: courses on 'computer programming' without a demonstration of how to apply this to a humanities' research scenario, or courses on a SSH topic without digital methods or digital sources involved.)

The Course Registry project has thus far led to the following results:
a. Fine-tuned underlying platform design, based on the design available from previous stages.
b. A metadata scheme for documenting a course (*see Table 1 below*).
c. A source code repository[2], including some documentation, set-up instructions, and a bug tracker.
d. Hosting of the platform by the Austrian Academy of Sciences.
e. A web server with the following URL: https://registries.clarin-dariah.eu/courses/ (reflecting the joint responsibility of the two ERICs involved).
f. Access control and interface: access control is related to the integrated database client, which allowed moderators to access all database tables. Interface concerns the numerous enhancements and bugs in the web interface.
g. A database dump of the currently available course descriptions and schemata.[3]

---

[2] The code of the registry (including documentation) is available at https://github.com/hashmich/DH-Registry

h. A monitoring protocol for national moderators drawn from the CLARIN-DARIAH pool (*see section 5.1*).

4 Data curation and metadata scheme

4.1 Data collection and data curation

The process of collection/curation of the currently available data (approximately 100 courses descriptions from 9 different countries[4]) involved the following steps:

1. Conduct web research on webpages of universities that list research activities in faculties of Humanities, Computer Science, Information Science, Communication Studies.
2. Manually document the results of the web research in a Google spreadsheet, manually transport it to the back end of the database and attribute specific codes to it.
3. Tag the courses with the TaDiRAH taxonomy, developed by DARIAH to tag DH activities on a very granular level: http://tadirah.dariah.eu/vocab/index.php. (This was done with the intention of increasing the traceability and linking potential of the courses. This feature will be evaluated for suitability currently and may be adjusted.) Courses are also tagged for disciplines.

In addition to this regular process the following measure have been taken to increase the coverage and quality:
4. The registry offers the possibility for lecturers to add courses to the registry without the direct interference of the national moderator. They can register at https://registries.clarin-dariah.eu/courses/users/register and the course will be added at once. A validation protocol has been designed so that after approval by the national moderator, courses are added to the registry.
5. To identify outdated information, a feature has been added that flags an entry (red) when it is not updated after a certain amount of time; eventually inactive entries disappear from the registry. The problem of information not being up-to-date after some time is partly covered by making moderators responsible for monitoring the quality of the data. From each country a national moderator will be appointed by the respective National Coordinators of CLARIN and DARIAH, drawing on the pool of colleagues from both ERICs to ensure the engagement of the moderators to monitor courses on a regular basis. (See the Appendix for an explanation of the role of moderators.)
6. Fall back on the manual checking of entries on the basis of further web research, and web research to identify suitable courses by members of the project team.

---

[3]The database dump can be found here: https://github.com/hashmich/DH-Registry/blob/master/app/Config.template/Schema/dhregistry.sql
[4] The following countries are currently represented in the course registry: Austria, Belgium, France, Germany. Italy, the Netherlands, Spain, Switzerland, United Kingdom.

4.2 Metadata DH Course Registry

This subsection presents the metadata scheme adopted for the course descriptions. See Table 1 below.

In addition tags that are not directly included in this metadata scheme can be assigned to the courses using pivot tables. They can be used as filters and will help the users of the registry to narrow down their search to the disciplines, research object, methodologies focused on, etc., to their interest.   These tags are either based on:

1. (an adjusted version of) the disciplines categorization as applied by the Dutch Scientific Council for Academic Research (NWO) and NARCIS,
   the categorization used by the Dutch Royal Academy of Sciences (http://www.narcis.nl/classification/Language/en), or
2. (a selection of) tags from TaDiRAH (Taxonomy Digital Research Activities in the Humanities); available at http://tadirah.dariah.eu/vocab/index.php.

In the next stages of the project an assessment will be conducted on the usability of the tag sets. Further adjustments, in particular with the aim to serve the CLARIN communities better, are to be expected. An important aspect in the selection of tag sets to be used as the basis of filtering is the number of hierarchical levels. A *help file* will be generated with an explanation the discipline labels selected.

Field Name	Type	Description
id	INT	Unique course identifier within the Course Registry.
user_id	INT	The identifier of the user, who is assigned to maintain this course.
active	TINYINT [0,1]	Whether or not the course shall be visible to the public.
created	DATETIME [YYYY-MM-DD HH:ii:ss]	The course entry creation date and time.
updated	DATETIME [YYYY-MM-DD HH:ii:ss]	Date and time of the last update. Equals `created` on creation. Utilized to calculate the course expiry date based on a fixed expiration period.
name	VARCHAR	The course title.
description	TEXT	A verbose description of the course content, intent, audience, etc.

country_id	INT	Identificator of the country, referencing table `countries`. Utilized for filtering.
city_id	INT	Identificator of the city, referencing table `cities`. Utilized for filtering.
institution_id	INT	Identifier of the Institution, referencing table `institutions`. Utilized for filtering.
department	VARCHAR	Name of the department.
course_parent_type_id	INT	Identifier of the Course type I, referencing table `course_parent_types`. Utilized for filtering. [Degree, Credits]
course_type_id	INT	Identifier of the Course type II, referencing table `course types`. Utilized for filtering. [Bachelor, Master, …]
language_id	INT	Identifier of the language, referencing table `languages`. Display only.
access_requirements	TEXT	Description of the required qualifications to participate.
start_date	VARCHAR	Starting date of the course. The field is of type VARCHAR and not DATE, to allow entry of dates such as "winter semester" for recurring dates as well.
recurring	TINYINT [0,1]	Whether or not the given start date recurs each year.
url	VARCHAR	URL of general information about the course or studies.
guide_url	VARCHAR	URL to curricula, teaching material etc.
ects	FLOAT	Number of ECTS points granted.
contact_mail	VARCHAR	Email of the lecturer. (the lecturer might not be the

		maintainer)
contact_name	VARCHAR	Name of the lecturer. (the lecturer might not be the maintainer)
lon	DECIMAL	Geographical longitude (WGS 84) of the course location.
lat	DECIMAL	Geographical latitude (WGS 84) of the course location.

Table 1. Metadata model for the course descriptions

5 Evaluation and next steps

5.1 Lessons learnt

Some lessons were drawn from the obstacles encountered during the initial stages of the project. This section discusses the insights gained and provides some recommendations for future steps to be considered (long term) and for the steps for the next stage (2017).

Classification and discipline labelling: a balancing act
During the process of expanding the DH Course Registry content, the list of disciplines related to the field of Digital Humanities underwent several changes. Another shift in focus is to be expected from the perspective that the CLARIN community will bring. In the next stage some tests are planned with. Clearly adequate filtering on disciplines and discipline-specific features calls for continuous monitoring and possibly adjustment of the tag set used, while sustainability of the annotations will require stability in the tagset.

To keep the filtering function in line with the needs within the community of use the following was agreed already:
   a. the platform can distinguish between *must have* metadata fields and optional fields
   b. a reassessment of the adequacy of the discipline list underlying the filter needs to be conducted periodically.

National moderators
The DH Course Registry has been set up primarily as a portal pointing to courses at national and international level for course makers (teachers) and students. Its potential for success is partly based on the fact that other than for research output there is currently no information system for courses in Higher Education on DH.

For the monitoring of the quality of the registry a role is foreseen for national moderators who will check the course descriptions. Over the past year, the engagement

9

in this monitoring task was rather limited. Reasons for this are: (1) national moderators do not have much time or in some cases countries that are represented in the registry do not have a national moderator appointed, and (2) national moderators were not well instructed; (3) it is difficult for moderators to approach all relevant institutions; especially if the number of institutions with relevant courses in a country is high, it is not straightforward how to maintain an overview.

The DARIAH-CLARIN collaboration led to various new ideas for how to increase the number of candidates for this role and the level of community engagement. Activities to generate awareness for the registry have been planned, and due to the growth of the membership of CLARIN and DARIAH there is now a larger pool people that could be assigned a monitoring role. Clearly it is crucial that the course descriptions need to be curated on a regular basis. A discussion is needed to identify measures and reward mechanisms that could make this a realistic expectation.

Filtering system
To make the registry easily searchable, a filtering functionality has been introduced. An important part of this is the ability to search on SSH disciplines. The discipline filter it is meant as a tool for ease of access, and therefore we opted for a compact list of not too many disciplines. Some decisions for "tags" were taken for pragmatic reasons, such as knowing that there is a lot of teaching in a specific area despite it being subordinate to a larger discipline category. It should be noted that the discipline filter, just like the rest of the DH Course Registry, is a "living system", which can be adjusted based on community input and experience. If the planned test confirms the expectation that some refined tagging is needed to identify courses for Natural Language Processing, additional labels will be introduced. In the same vein, if we would find out that nobody actually teaches "Artificial Intelligence" in a DH context, that label can be removed.

The compatibility with other available ontologies and/or taxonomies that could contribute to a user-friendly filtering on disciplines has been taken into account, such as CERIF[5]. This issue will be taken up again once the coverage of the current tagging system has been evaluated by representatives of the CLARIN community.

5.2   Next stages

As indicated, the CLARIN-DARIAH collaboration on the DH Course Registry is a living project: the search facilities are planned to be refined in the near future and in the longer run a portal for teaching materials is planned. Till the end of 2017 the focus will be on improving the usability of the platform of the various communities and user types, outreach and governance. In addition, we will collect ideas for future extensions of the functionality of the platform.

---

[5] CERIF (http://www.eurocris.org/cerif/main-features-cerif) is ontology for research entities and their relationships. It distinguishes between the following levels: Specification (Conceptual Level), research entities and their relationships (Logical Level) and research entities and their relationships (Physical Level). However, CERIF is not suited for our purposes, because the top-level tagset for humanities is too general (5), while the second-level tagset is too extensive (160+).

Usability testing of platform
This entails collecting feedback from researchers in the CLARIN community (topics to be included: adequacy of current metadata schema and search facilities) and collecting feedback from national moderators on the curation protocol and manual.

Awareness actions
As explained in Section 3, the current registry builds on a predecessor called DODH. Within this predecessor project several dissemination activities have been undertaken (e.g., at DHBenelux 2015[6] and DH2016 in Krakow). This has already generated some awareness among the target audiences.
The launch of the new release will take place during the DARIAH days in April 2017 and is likely to attract attention again. During the upcoming CLARIN newsletters and community events awareness for the registry and the potential to use it for integrating descriptions of courses that are relevant for the various CLARIN communities will be raised. A clip is in the making with Videoscribe illustrating the registry's interface for uploading course descriptions. A similar instruction clip is planned for the use of the registry. These clips will be published on the CLARIN website.

Governance
The collaboration on the DH Course Registry between CLARIN and DARIAH started in September 2016 with consent of the respective boards of the ERICs. This collaboration will be continued in the upcoming stages of the realization, monitoring and periodic evaluation of the platform in order to ensure a sustainable future of the platform.

Options for future extensions
Currently the collection and curation protocol is based on the idea of national moderators who collect and upload information. It is considered to create a second platform where teachers and researchers can upload their teaching materials without one of these national moderators as intermediary. The benefit would be that people would be able to store their course descriptions and materials in one open access environment.

Monitoring the role of national moderators
National Moderators will be selected from the CLARIN-DARIAH pool, and whenever this seems feasible and relevant, from other countries. A crib sheet describing the role of national moderators has been prepared and will be distributed among CLARIN and DARIAH colleagues. (See the Appendix for a version based on the beta-version of the platform.) Once the DH Course Registry will have generated a certain user base, it could be considered to transfer part of the responsibility of National Moderators to maintainers of courses and curricula at universities. Another possibility is to delegate the tasks of National Moderators to student assistants. In the Netherlands this has proven a successful model.

---

[6] Scagliola, S, Safradin B., Schmeer H., and Scharnhorst A., *"Dutch overview of Digital Humanities",,* DH Benelux Conference 2015, available at http://www.dhbenelux.org/wp-content/uploads/2016/05/94_Scagliola_et-al_FinalAbstract_DHBenelux2016_demo.pdf

Candidate registries that could be linked to the DH Course Registry

Apart from including pointers to relevant resources in the CLARIN and DARIAH infrastructure it could be considered to include links to the following registries:

- DiRT - Digital Research Tools is a registry that enables searching for digital research tools for scholarly use. DiRT is maintained by an international volunteer community of professors, students, and librarians. It can be used for discovering and comparing DH tools. It enables access to a variety of tools that range from software for analysis and visualization work to tools for annotating resources and managing bibliographies. The tool descriptions include information such as the platform (e.g. Windows, iOS, etc.), financial aspects and licensing. In addition one can find reviews, tips, and tricks for efficient use. Available at http://dirtdirectory.org/.
- Zenodo is a service that enables sharing, preserving and publishing multidisciplinary research results in form of data and publications that are not part of the existing institutional or subject-based repositories of the research communities. All research outputs from all fields of science are welcome. Types of files range from books and book sections to images, software and interactive materials such as lessons. Zenodo was launched within the EU funded OpenAIREPlus project. Available at http://zenodo.org/collection/user-dcc-rdm-training-materials.
- ADHO - The Alliance of Digital Humanities Organizations does not maintain an inventory of training materials. However, their website offers a collection of "resources" which includes a detailed list of relevant summer schools in the field of Digital Humanities. Available at http://adho.org.
- Open Educational Resource Platform offers training material in various research areas. In the 'DARIAH-Group' a huge number of either self-generated learning and teaching materials or external open licensed material in the field of Digital Humanities for higher education has been collected (an effort by DARIAH-DE). Training material is divided into the categories: Computational Linguistics, Digital Humanities, Digital Libraries and Databases, Semantic Technologies, Software Engineering, Technical Applications, and Technical basics. Available at https://www.oercommons.org/groups/dariah/229/.
- #dariahTeach is an Erasmus+ project that will launch a repository with open-source multilingual teaching materials teaching for digital scholarship in March 2017. It aims to strengthen and foster innovative teaching and learning practices among the members of DARIAH. Available at http://dariah.eu/teach/.
- TeLeMaCo is a collaborative portal for training and teaching materials relevant in linguistics and digital humanities hosted at the CLARIN-D centre at Saarland University in Saarbrücken. The portal is easy to use both for casual users who search for teaching and training material and for community members who want to contribute descriptions of their materials. TeLeMaCo offers search and access to a wide range of teaching and learning materials, including the following; technical documentation (e.g., quick starts, tutorials, or full manuals); learning material for self study (e.g., YouTube videos and screencasts); short teaching modules (2–4 hours) that can be integrated in existing courses; full

courses covering a broader spectrum of language resources and tools or focusing on specific topics of application of language resources and tools; reference materials (e.g., specialised dictionaries). Available at http://clarin-d.net/de/ueber/lehrmaterial
- The H2020 project Parthenos has produced a training plan (D7.1), mainly consisting of "training the trainers" activities and pilot courses for the consortium members. The plan details audiences and topics and is validated through experts' consultation. Available at http://www.parthenos-project.eu/?s=training

6 Conclusion

The DH Course Registry described in this report has been set up as a portal to find courses fostering digital scholarship in SSH at the European level for course makers (teachers), students and policy makers. It is the result of collaboration between representatives of DARIAH and the CLARIN-PLUS team and has been built on previous efforts initiated in the context of CLARIAH.

To ensure the sustainable operation of the DH Course Registry the following actions have been planned for the next stages:
- assessment of the usability of the tag sets used
- integration of a *help file* with an explanation of the discipline labels selected
- launch of the re-installation of the registry as a joint CLARIN-DARIAH initiative in April 2017
- refinement of the model for engaging national moderators in monitoring the quality of the course description entered in the registry;
- development of a model for governance
- development of a model for overall supervision and technical support;
- the planning of (online) dissemination activities.

The software developer who has designed the platform will remain available until the end of 2017 to ensure proper guidance and platform adjustment into the next stage.

Appendix – National moderator's crib sheet

Introduction to the DH Course Registry

The DH Course Registry offers an online platform and underlying information system that provides a searchable registry with information on courses and courseware for the digital humanities. It currently covers only (a selection of) DH courses offered by European academic organizations, but an extension of the Registry beyond Europe may be considered later. Students, lecturers and researchers can search the database on the basis of *topographical information (*location*)*, *ECTS credits* or the *academic degrees* that are awarded. In addition it is possible to search for courses based on *TaDiRAH*, a Taxonomy of Digital Research Activities in the Humanities (including labels for techniques and objects) and *sub-disciplines* from the Social Sciences and the Humanities (SSH).

The goal of the DH Course Registry is to provide information to: (i) *students and researchers* who intend take up a study in the field of Digital Humanities, (ii) *lecturers* who are looking for examples of good practices in the DH field or want to promote their own DH-related teaching activities and material, and (iii) *administrators* who aim to attract and facilitate staff mobility and exchange

The database content will be moderated. The selection of content will be based on requests for the registration of courses, and on the identification of relevant courses by the national moderators that will be appointed by the DH Course Registry team (based on nominations from CLARIN and DARIAH).

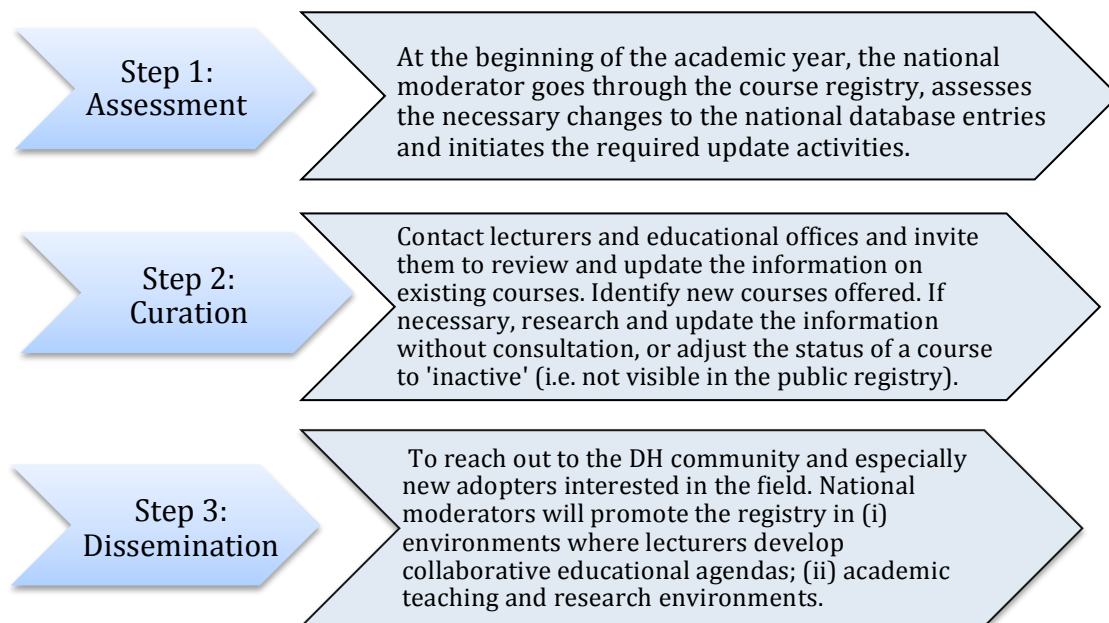## Criteria for acceptance of courses

The DH Course Registry will be as inclusive as possible, but will also be based on some very basic restrictions in order to keep the information in the database relevant for the envisaged audience and DH-focused:

- No basic *computer literacy* courses (e.g., courses that teach European Computer Driving license Courses, Office applications)
- No basic *information management* courses (e.g., courses at libraries on how to search literature/sources)

National moderators

For each country that is represented in the Course Registry, a dedicated national moderator will *monitor* and *curate* the database entries for his/her country. The national moderators will be appointed by the respective *national coordinators of CLARIN and DARIAH,* drawing on the pool of colleagues from both ERICs to increase the number of candidates. The primary task of the national moderators will be to *ensure the accuracy of the database*, *curate the data* and *reach out* to students, lecturers and administrators in their respective countries.

Tasks of national moderators described in steps

Step 1: Assessment

At the beginning of the academic year, the national moderator goes through the course registry, assesses the necessary changes to the national database entries and initiates the required update activities.

Step 2: Curation

Contact lecturers and educational offices and invite them to review and update the information on existing courses. Identify new courses offered. If necessary, research and update the information without consultation, or adjust the status of a course to 'inactive' (i.e. not visible in the public registry).

Step 3: Dissemination

To reach out to the DH community and especially new adopters interested in the field. National moderators will promote the registry in (i) environments where lecturers develop collaborative educational agendas; (ii) academic teaching and research environments.

Access Guidelines for the DH Course Registry

This appendix provides guidelines for national moderators on the following tasks:
A. how to update the registry content (adding/reviewing new courses)
B. how to give course maintainers access to the database

In both scenarios the url to be used is: https://registries.clarin-dariah.eu/courses/

A. Steps to update courses that are already in the system

Step 1. Go to the website and log in (or register in case of first time access)

Step 2. In the upper left part of the page, click on Dashboard and a map together with a list of courses will appear.

Step 3. Click the 'review' button of a course that needs to be updated.

Step 4. A review form will appear, to be filled in by the national moderator.
Note that courses are not displayed any longer if the "last-update" field's date is too long ago. To mark a record as up-to-date, the moderator has to check and submit the form, even if the information has not been changed.

Step 5. The national moderator can add new entries to each table in the left admin top-menu, in case an institution, language or person is missing in the list.

B.   Steps for moderators to give access to <u>new</u> course maintainers

Step 1. Go to the website and log in (or register in case of first time access)

Step 2. Click on the 'invite' link visible on the dashboard

Step 3. Complete the review form that appears on the screen:

Step 4. The recipient will receive a confirmation email that he/she has been added as a trusted user to the DH Course Registry. He/she can now enter courses and curricula of his/her university or institute to the database. To access the account, the recipient needs to set a password via a link in the email.

Step 5. If he or she clicks on the link and logs in, a field will appear to add courses:

Step 6. The entered information on the form will be automatically visible on the Course Registry's website. Note that owners of course records receive an email based on the date in the field "last-update" to keep their entries alive. This should be considered when making changes to entries not maintained by yourself.

Step 7. The national moderator logs in to review the newly added course.

Step 8. The national moderator checks the moderated courses, i.e. courses that have been added by course maintainers.

Step 9. Approve or reject changes to courses: the national moderator can review the course information and change the entered information or can choose to delete the course in its entirety.