Digital Humanities in the Nordic Countries – the Fifth Conference

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Abstract. The paper provides insight into the programme construction of the 5th conference Digital Humanities in the Nordic Countries (DHN) that was to have taken place in Riga in March 2020 and an analysis of the DHN conferences during the last three years by exploring participant activity per country focusing primarily on the Nordic and Baltic region, their disciplinary adherence and the choice of pre-defined topics.

Keywords: Digital Humanities, Conference, Nordic Countries, Baltic Countries, Participation Analysis.

1   Introduction

The Digital Humanities in the Nordic Countries (DHN) was established in Oslo in 2015 with the aim to strengthen research, education and communication in the field of Digital Humanities, as well as to coordinate and inform about activities that take place in the Nordic region, including the Baltic States. It is an associate organization to the European Association for Digital Humanities. In March 2020, the fifth annual conference of DHN was to have taken place in Riga following DHN conferences in Copenhagen (2019), Helsinki (2018), Gothenburg (2017) and Oslo (2016) [1].

In March 2020, COVID-19 (a.k.a. coronavirus) rapidly spread throughout Europe, including Nordic and Baltic countries. Recommendations to limit public gatherings and avoid travel were issued by one country after another. Due to evolving public health risks related to this coronavirus, a few days before the beginning of the conference which was to begin on 17 March 2020, the organizers, in consultation with the national government, made a decision to postpone the conference to October 2020. Currently, at the end of April 2020, it is still not known when and how the COVID-19 pandemic will end, when travel restrictions will be removed in Europe, and it is too early to predict whether it will be possible to carry out an onsite conference in late October.

Nevertheless, as DHN2020 conference programme was fully ready and published in March, and proceedings were timely prepared, it was decided to publish DHN2020 proceedings in spring 2020 as it was initially intended. The participant data analysed in the following chapters of the introduction is based on the programme that was prepared

for March 2020 and, in general, reflects DHN2020 conference as it should have been if it took place as planned. This paper provides an insight into initial DHN2020 programme[1] and an analysis of the Digital Humanities in the Nordic Countries conferences during the last three years by exploring participant activity per country focusing primarily on the Nordic and Baltic region, their disciplinary adherence and the choices of pre-defined topics.

2 DHN2020: Thematic Focus and Programme

DHN conferences, as it has been already stated by previous organizers, are characterized by openness as they welcome different kinds of submissions in terms of topics, methodologies, tools and results pertaining to the ambiguous field of digital humanities (DH) [2]. Thus, participants come from a variety of scholarly backgrounds, such as different fields of cultural heritage and humanities, as well computational science. The challenges and gains of such an open approach in organizing a regional conference have been explicitly explained by Eetu Mäkkela and Mikko Tolonen, the organizers of DHN2018 in Helsinki [3].

The DHN2020 conference in Riga was organized by the National Library of Latvia[2] (which also hosted the conference), the Institute of Literature, Folklore and Art of the University of Latvia[3], and the Artificial Intelligence Laboratory of the Institute of Mathematics and Computer Sciences of the University of Latvia[4]. The special focus of the call for submissions of DHN2020 was given to interdisciplinary connections and methodological links between digital humanities and digital social research. Striving to acknowledge productive interconnections between the disciplines, the aim was to invite researchers from both fields to engage in a broad discussion of knowledge sharing and debates inspired by various forms and results of interdisciplinary cooperation (see, e.g. [5, 6]). The highlighted topics in the call for submissions included digital humanities and data journalism, digital political and social research, and digital discourse analysis and media studies. Possible points of intersection offered by the call were fake news and the spread of misinformation, semantic technologies, digital activism, digital forensics, ethical challenges in data-driven social media research, big data and media monitoring, news archives, and research data archiving. Two keynote speeches were designed to address these issues specifically: Virginia Dignum on responsible artificial intelligence and Jon Roozenbeek on fake news.

Another special topic that was highlighted in the DHN2020 call for submissions was digital approaches to studying, teaching and the revitalization of endangered and small languages and indigenous cultures. To contribute to this topic, a special workshop and discussion "Digital Approaches to Endangered Language Communities: A Nordic Perspective" was organized before the main conference programme in cooperation with

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[1] To avoid eventual misunderstandings, the DHN2020 programme that was prepared for March 2020 will be further called as "initial programme".

[2] http://lnb.lv

[3] http://lulfmi.lv

[4] http://ailab.lv

the Livonian Institute (University of Latvia) and with support of the Nordic Council of Ministers' Office in Latvia. The workshop aimed to introduce digital tools and resources developed in Nordic countries for endangered languages like Livonian, Sámi, Võro, Votic, and others, as well as discussed practices explaining how these tools are used for research and language revitalization.

Apart from these two special topics, DHN2020 also invited submissions dealing broadly with:

- digitally born data: web archiving, web research, web history, digital cultural heritage and folklore;
- digital research services in libraries, archives and museums;
- participatory research methods, citizen humanities/citizen science, crowdsourcing and communication in digital humanities and heritage studies;
- digital language resources (e.g. historical texts, parliamentary records, speech and multimodal corpora, social media data, etc.) and tools for digital humanities and social sciences (e.g. linking data across domains, media and languages).

All special topics were represented in the submissions; however, it was expected that the number of participants representing the social sciences would be higher. Nevertheless, two sessions of the DHN2020 were devoted to the topics relevant for digital social issues.

3   DHN2020: Disciplines and Topics

The last three DHN conferences have used the ConfTool conference management system [4]. It is a web-based tool to support the organization of such academic events as conferences, workshops, etc. The analysis provided below is based on data extracted from the Conftool system after the review process of all three conference submissions have been finished. The data available from DHN conferences include information on submissions that have been accepted for presentation. The acceptance rate has been different for each conference – as it was decided by the Programme Committee. In the last two years it has been around 75%.

During the paper submission process, authors were asked to state which of the given disciplines and topics apply to their submissions. Authors could choose any number of disciplines and topics from a controlled vocabulary that has remained almost unchanged for the last three years of the DHN conferences. Primarily, this information serves as a guideline to match reviewers to papers; however, it also indicates the "specific composition of Nordic DH" [3] and allows one to follow which research disciplines and DH themes are present in the conference, how they are distributed over the years, and from which countries.

The top six disciplines in the DHN conferences have remained unchanged over the last three years. They are the following: historical studies, linguistics, literary studies, library and information science, cultural studies (in 2018 and 2019 – cultural and area studies), and communication studies (see Figure 1).
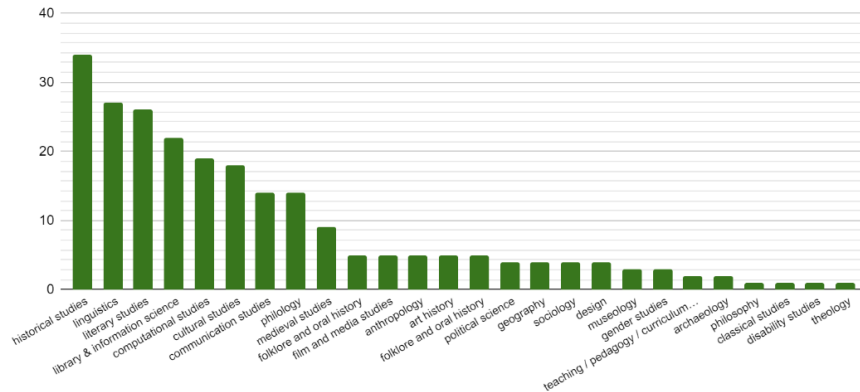
Fig. 1. Disciplines associated with DHN2020 accepted proposals.

Figure 2 provides a breakdown of how DHN2020 most popular disciplines are distributed across the Nordic and Baltic countries. Participant countries beyond this region, 23 in total, are marked as "Other". Contributions from countries outside the Nordic and Baltic region mostly focus on the fields of cultural studies (53% out of all submissions related to the field of cultural studies), historical studies (44%), as well as library and information science (36%).
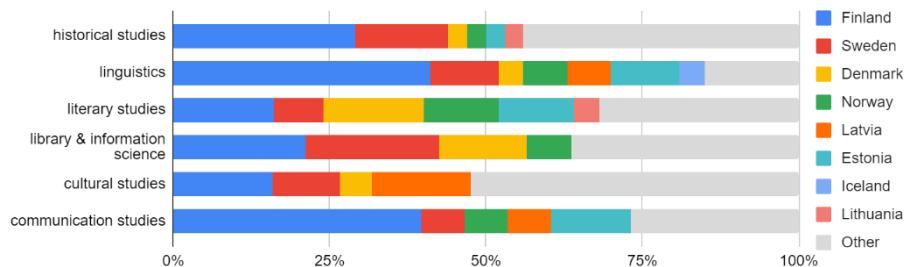

Fig. 2. Distribution of research disciplines across the Nordic and Baltic countries in DHN2020.

Such a distribution allows for distinguishing the most represented disciplines by each country. For example, linguistics, historical studies and communication studies are convincingly represented by Finnish participants, while library and information science, historical studies and linguistics are the top three disciplines represented by Sweden in the DHN2020 initial programme. The most popular disciplines of Danish proposals are literary studies and library and information studies. Norwegian participants deal more considerably with literary studies. Estonians are equally represented in linguistics, literary studies and communication studies, while Latvians mostly deal with cultural studies in the DHN2020 initial programme.

Similarly to the research disciplines, the most popular DHN topics (*data/text mining, cultural heritage collections, corpus linguistics, digital resources, NLP*) have remained

almost the same over the last three years (see Figure 3). Nevertheless, in 2020 for the first time *data/text mining* has been attributed to the proposals the most often thus surpassing *cultural heritage collections* and *digital resources* which prevailed in the two previous years [cf. 2, 3].
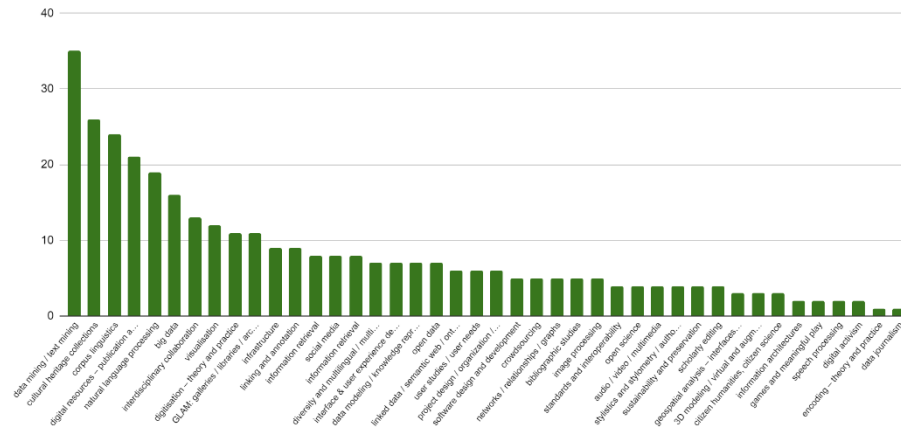

Fig. 3. Distribution of topics among accepted DHN2020 proposals.

Breaking down the predefined topics of the DHN2020 initial programme across the countries (Fig. 4) gives another interesting perspective. "Other" countries have mostly contributed to *GLAM* (58%), *digital resources* (54%), and *interdisciplinary cooperation* (50%).

Finnish proposals noticeably prevail in such topics as *big data* and *visualization*. Swedish participants mostly deal with natural language processing, GLAM, corpus linguistics and cultural heritage collections. Danish proposals almost equally cover all the most popular topics except *big data* and *visualization*. Norwegian proposals deal more with the topics of *digitization – theory and practice*, as well as *corpus linguistics* and *digital resources*. The most popular topics in Latvian proposals are *corpus linguistics*, *cultural heritage collections* and *big data*, whereas Estonians equally address *data/text mining, cultural heritage collections, corpus linguistics* and *interdisciplinary collaboration*. The most popular topics in Lithuanian proposals are *digital resources* and *digitization*; the latter is also the most used topic in Icelandic DHN2020 proposals.
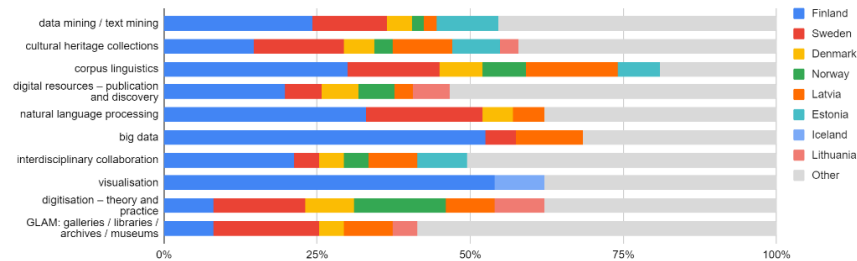
Fig. 4. Distribution of topics across the Nordic and Baltic countries in DHN2020 initial programme.

4   DHN2020 geography

The Digital Humanities in the Nordic Countries, as its title already suggests is primarily focused on Scandinavian countries. Nevertheless, the involvement of Nordic countries has never been equal in DHN conferences. According to the reports of two previous DHN conferences [2] and [3], from 2016 to 2019 the most stable participation has been by Sweden (ca. 23%). Finnish participants have usually formed ca. 25%, except in 2018 when their participation boosted to more than half of all participants. From 2016 to 2019, Denmark's participation has constantly grown – from 11% in 2016 to 31% in 2019 when DHN conference took place in Denmark. Iceland is a much smaller country, and usually its participation is considerably lower than that of the rest of Scandinavian countries.

To explain participation by countries in DHN2019, the main source of country participation is the number of participants (not authors) in the DHN2019 conference [2]. For DHN2018, data on proposal authors by country and on DHN2018 participants by country were analyzed [3]. Giving equal value to all conference proposals in terms of participating countries is a commonly used approach. Albeit, when it comes up to presenting participation data on a heat map, this approach might seem too general as it does not take into account co-authoring of proposals. A presentation submitted by numerous authors from different countries will give similar weight to each country as single authored or co-authored presentations from one country. The necessity to take these nuances into account when counting participants by countries becomes more apparent when one proposal is co-authored by participants representing, for example, ten different countries.

The approach used to analyze DHN2020 participation by countries is the following: each country is weighted accordingly to its share in a proposal. If a proposal is single-authored or co-authored by participants from one country, the represented country's score is 1. If a proposal if co-authored by authors of two different countries, each of represented countries is weighted as 0.5, etc. If an author represents two countries, each of them is equally weighted as 0.5 in a proposal. Comparing to data given by the

organizers of DHN2019 and DHN2018, the participation rate provides slightly different results, but still is relatively close to the proportion of proposal authors see [3, Table 3].

Table 1. Participation rate (and percentage) of the Nordic and Baltic countries in DHN conferences.

Country	2018	2019	2020
Finland	78.32 (45.80%)	19.4 (23%)	24.7 (23.52%)
Sweden	26.1 (15.26%)	21.25 (26%)	15.5 (14.76%)
Norway	9.5 (5.56%)	7.2 (9.00%)	4.33 (4.79%)
Denmark	9.24 (5.40%)	12.83 (15%)	6.41 (7.47%)
Iceland	3 (1.75%)	4.5 (5.00%)	2 (1.9%)
Estonia	4 (2.34%)	3 (4.00%)	7.5 (7.14%)
Latvia	5 (2.92%)	0 (0.00%)	11.5 (10.95%)
Lithuania	0.12 (0.07%)	0 (0.00%)	3.5 (3.33%)

This is a technical weighting which does not and cannot deal with the actual efforts of each participant; main authors or presenting authors are not taken into account. Collaboration and large project teams are common in digital humanities. Nevertheless, this approach provides a more nuanced picture regarding country representation in the conference. Participation data according to this methodology for last three DHN conferences is provided in Table 1.

Figure 5 reveals the tendency of each countries' participation more clearly, whereas Figure 6 shows the proportion of the Nordic and Baltic participation in DHN conferences over the last three years.
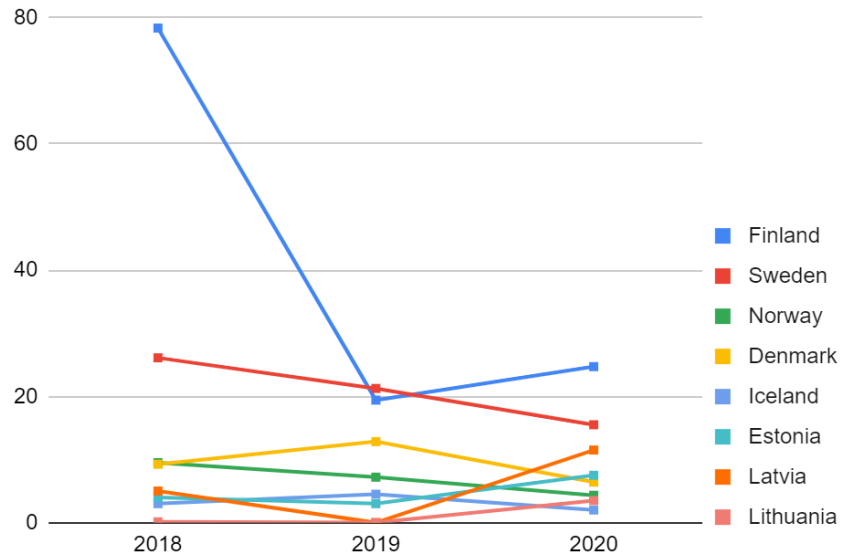
Fig. 5. Participation rate of the Nordic and Baltic Countries in DHN conferences.
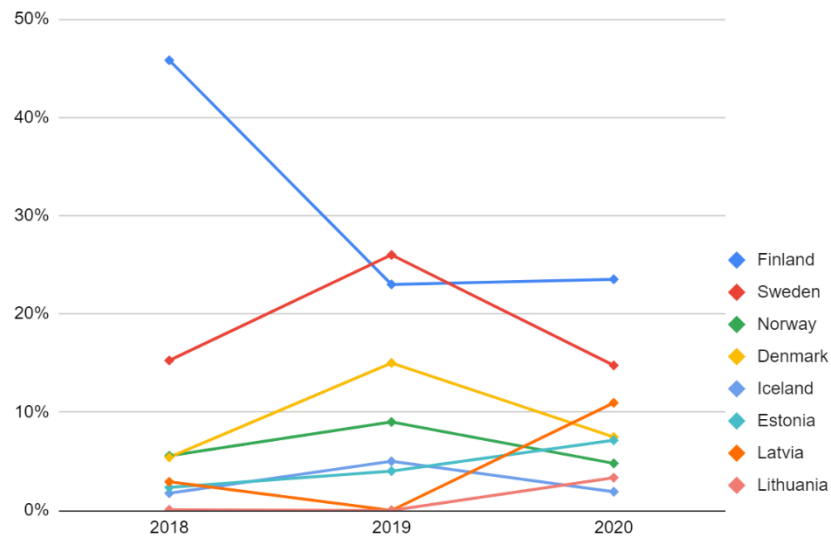

Fig. 6. Proportion of participation of the Nordic and Baltic countries in DHN conferences over the last three years.

Since the establishment of the organization "Digital Humanities in the Nordic Countries" there have also been constant attempts to raise the Baltic DH representation in the organization and its annual conferences. The call for papers in DHN2018 even included a special address towards the Baltic DH community which resulted in 9 participants from Estonia and one from Latvia [3]. At the DHN2019 in Copenhagen, there were six Estonian and one Latvian participant, but no authors from Latvia. As it is seen in Fig. 5 and 6, organizing of a DHN conference in one of the Baltic countries was the most successful strategy to invoke interest of the Baltic DH community's interest in the DHN. The participation rate of Baltic countries is 22.5% in DHN2020.

Being regional events, DHN conferences attract a considerable number of participants outside the Nordic and Baltic region. In many cases proposals are submitted by international teams involving people from different parts of the world. According to the calculated participation rate, around one third of all submissions are contributed by participants outside the Nordic and Baltic region. In 2020, the participation rate is 33.05 (or 31.48% from all accepted submissions), 2019 – 30.22 (36.41%), while in 2018 the participation rate was higher, at 35.71 while the proportion of contributions by participants outside the region was less than it would be for the next two years – 20.88%. This can be explained by the high activity of the local Finnish DH community in DHN2018 [see 3]. Table 2 provides a detailed overview of contributions from the countries of the highest participance rates in DHN conferences.

Table 2. Participation rate (and proportion) of countries in DHN conferences outside the Nordic and Baltic region.

	2018	2019	2020
Canada	4.13 (2.41%)	-	-
Germany	2 (1.17%)	2.75 (2.98%)	5.33 (5.08%)
Russia	6 (3.51%)	1.5 (1.81%)	4 (3%)
UK	2.45 (1.44%)	1.5 (2%)	3.13 (2.98%)
The Netherlands	2.25 (1.32%)	0.5 (0.60%)	2.57 (2.45%)
USA	8.33 (4.87%)	1.5 (1.81%)	2.27 (2.17%)

German participation has been increased more than 50% over the last three years. In DHN2020 Germany is even more represented than some of the Nordic and Baltic countries. Participants from the USA, the UK, the Netherlands and Russia have been a consistent part of DHN conferences for the last three years. Apart from these, DHN conferences have also had participants from Australia, Austria, Belgium, Brazil, Czech Republic, China, Cyprus, France, India, Ireland, Japan, Luxembourg, Malta, Poland, Slovenia, Spain, Switzerland, and Qatar.

5   Proceedings

This is the third year when selected papers of the DHN2020 conference are being published in the proceedings. The number of papers included in the proceedings is 38 which is more than one third of all accepted proposals. All the papers have undergone peer-review by two or mostly three reviewers, and the authors have revised their manuscripts according to the reviewers' comments and suggestions.

According to the type of submissions, the papers are divided into three categories – long papers, short papers and posters covering all the major topics given in Figure 3, as well as special DHN2020 topics reflecting today's diversity of digital humanities as well as the rapid development of interdisciplinary and international research. According to the blind peer-review, the best papers of DHN2020 were acknowledged to be the following:

"Emotional Imprints: Letter-Spacing in N.F.S. Grundtvig's Writings" by Katrine F. Baunvig (Aarhus University, The Grundtvig Study Centre, Denmark), Oliver S. Jarvis and Kristoffer L. Nielbo (Aarhus University, Centre for Humanities Computing, Denmark) and "Wrangling with Non-Standard Data" by Eetu Mäkelä (University of Helsinki, Finland), Krista Lagus (University of Helsinki, Finland), Leo Lahti (University of Turku, Finland), Tanja Säily (University of Helsinki, Finland), Mikko Tolonen (University of Helsinki, Finland), Mika Hämäläinen (University of Helsinki, Finland), Samuli Kaislaniemi (University of Eastern Finland, Finland) and Terttu Nevalainen (University of Helsinki, Finland).

6   Conclusion

The annual conference of the international organization "Digital Humanities in the Nordic countries" was planned to take place in Latvia in March 2020. Due to evolving public health risks related to rapid spread of COVID-19 disease, the conference has been postponed to October 2020.

The introduction gave insight into the programme and composition of the initial conference programme in terms of the most involved research disciplines and topics. As is seen by the data analyzed in previous chapters, the DHN2020 would have followed the track of previous DHN conferences. There are no crucial changes either in the composition of participating countries, nor in the most popular topics associated with digital humanities that participants chose from the controlled vocabulary. The top six disciplines represented in the DHN conferences have remained unchanged over the last three years; they are the following: historical studies, linguistics, literary studies, library and information science, cultural studies, and communication studies. The most popular DHN topics also have remained the same over the last three years: *data/text mining, cultural heritage collections, corpus linguistics, digital resources, NLP*.

The stable component, around one third, of participants coming from countries beyond the Nordic and Baltic region, suggests that international dimension and cooperation is a stable component of DHN conferences.

The number of participants from the Baltic States provided a remarkable increase in terms of both the participation rate and the proportion of all participants in DHN2020. This was expected as the conference took place in one of the Baltic States for the first time. Whether there will be a continuous and increasing integration of the Baltic DH communities in the DHN will be seen in the next DHN conference which is scheduled to take place in Uppsala in 2021.

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