Digital Humanities as an Incentive for Digitalisation Strategies in Eastern European HEIs: A Case Study of Romania

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1 Introduction

The emergence of digital technologies has been changing the educational landscape in the European Higher Education Area (EHEA) in the last decade. Transformations have occurred at multiple levels of digitally enabled products and processes, from the creation and preservation of information to the level of information transmission (Pfeffer 2003; Rampelt 2019) and exchange, thus fostering new learning ecologies (Galvis 2018). It is now widely agreed that "the current goals of the Bologna Process can be better achieved through harnessing digital technology" (Orr and Rampelt 2018: 2), which makes digitalisation a key strategy in building a common European framework for HEIs.

In order to synthesise, support and guide digital initiatives throughout Europe, a policy for the provision and management of digitalisation strategies has been proposed in the White Paper *Bologna Digital 2020* (Rampelt et al. 2019). This position paper argues that, among the Bologna Process strategies, a priority should be made of the digitalisation of the educational environment and offering "skills for the Digital Age". Although the 48 EHEA states have committed themselves to implement common policies by building a set of "structural reforms and shared tools" (as the official website of EHEA informs[1]), the asymmetries between the perspectives, needs and capacities of different cultures still vary greatly. The "significant differences in

[1]More information at: http://www.ehea.info/.

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the effect that the advanced technologies are having in different countries" (Guri-Rosenblit 2009: 69) have led to disparities in terms of not only infrastructure and priorities but also practices. These particularities have led, ultimately, to an uneven embedding of the digitalisation reform at the national level with digitalisation paths varying massively from one country to another.

The group of countries that struggles the most to "break with the old system" (Horner 2014: 7) and adopt the new European policies is the Eastern European (EE) ex-communist group. In contrast with Central and Western European countries, the primary challenge of EE higher education (HE) systems is to move away from the post-communist context. They also have to find "a mission for the system in itself, and not lusting for the quality of other systems" (Vasilache et al. 2012: 318), before reflecting upon further developments.

However, several steps related to digitalisation strategies at EE universities have already been undertaken, which is an indicator of shifts in perspective. The most representative universities (according to university rankings[2]) from countries such as Bulgaria, Hungary, Republic of Moldova, Republic of North Macedonia, Romania, Republic of Serbia and Ukraine have stated that they have policies and strategic planning regarding digitalisation and future actions. In almost all cases, e-learning strategies and platforms such as Moodle are mentioned, as well as digital libraries, digital communication systems and university management information systems (see Fig. 1). DH projects, however, are still rather underrepresented, even at the level of strategic policymaking, and many DH initiatives lack an institutional anchor or support.

In this paper, we will contextualise the situation of a particular set of digitalisation-related initiatives, falling under the aegis of digital humanities (DH), for the EE academic community. DH is a cross-disciplinary field by its very nature, integrating knowledge and approaches from several disciplines, derived either from the humanities (such as languages, literature, history, and arts) or the information technology spectrum.

> The first practices that emerged from this interdisciplinary convergence were based on its statistical processing in order to distinguish patterns and features that could assist in issues of stylometry and lexicography. More recently, digital humanities increasingly use computing methods to produce information visualisation, network analysis, text mining, databases, digital publishing and even the design of software dedicated to assist the work of digital humanists. (Reyes-Garcia 2015: 237)

The emergence of "the humanities computing" (ibid.) has resulted in significant challenges for HE institutional management and human-resource policymaking. In the Eastern European contexts, such challenges are even more severe, considering that universities in the region tend to lag behind their Western counterparts (Rogobete and Chitez 2019). That is why strategies are needed in order to reduce HE disparities within the EHEA (ibid.), including disparities at the level of digital reforms. Such strategies have the potential to strengthen attempts to modernise higher education systems and to promote values of equality, fairness and inclusion throughout the EU.

[2]More information at: https://www.timeshighereducation.com/world-university-rankings/2020/world-ranking#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/stats.

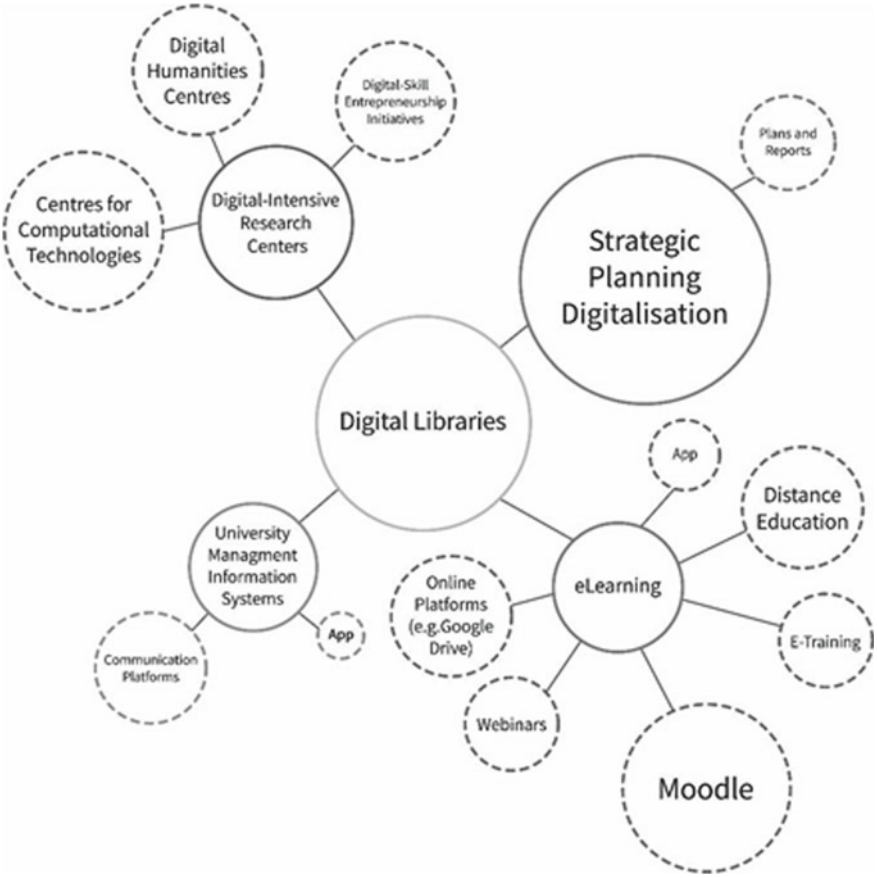

Fig. 1 Distribution of digitalisation strategies in Eastern European HEIs

2 Shift from Traditional to Digital Humanities

If digitalisation is today an expected trend, research fields are embracing it in various ways, depending on their ability to transfer and develop the potential of new methods used in learning and teaching. The area of research we consider more in need of strategic support and policy embedding in this context is the humanities. Humanistic inquiry is considered to be classical, having a defensive position towards reforms or re-evaluations. Whether literary studies, linguistics, cultural heritage and history, or other manifold branches are taken into account, humanities are held as having traditional perspectives, and their educational relevance is to bring insights and understand values and cultures. It has been argued that, in the last decades, there has been a "gradual process" of "marginalization of the humanities" (Costa 2019: 2), but it is undeniable that they are constantly endorsing a reflexive society. "[T]he

comprehensive knowledge, skills and mindset that come with studying the field […] are not easily outdated" (Costa 2019: 3), and "the effort of interpreting and attributing meaning to ourselves and that which surrounds us" (ibid.) is responsible for building scholars who incessantly challenge the world around.

Moreover, precisely because the field is considered classical, and the general perception (including the field's own self-perception) is that it does not intersect with digital methods, the computational turn was not seen as being able to foster a regeneration of the humanities. However, within HEIs, the use of digital technologies in the humanities has led to the inception of a new trend extending towards digital humanities. This brought the shift from "how to do things with words" (as J.L. Austin's influential work is titled) to "how to research things and words with digital tools". Embracing digital humanities practices can approach and answer old questions, breaking boundaries in science and research in general. Although the topic has also brought a sceptical view and concerns that non-digital related studies would be dismissed or excluded, digital humanities facilitate the intersection between "traditional" humanities research and new technologies. This means "doing the work of the humanities, in digital form" (Schreibman et al. 2016: xvii), bridging scholars, creating cross-disciplinary contexts and, more important, better adapting to current educational needs. The convergence between quantitative and qualitative points of view reinforces the critical thinking so necessary in this "post-truth" society. In this sense, the field of digital humanities "includes not only the computational modelling and analysis of humanities information, but also the cultural study of digital technologies, their creative possibilities, and their social impact" (ibid.).

The inclusion of digital humanities research within HEIs responds, therefore, to the technical innovations that require new skills in the 21st century: "The use of digital content, tools, and methods is transforming humanities research through greater access to materials and new modes of collaboration and communication" (Hughes et al. 2016: 153).

3 Integration of Digital Humanities Initiatives in the Eastern European Educational Landscape

3.1 Starting Point

Several studies (e.g., Terras 2011) indicate that most of the European DH centres are concentrated in the UK, Germany, France, Sweden and Finland. As a group, Western European HEIs[3] embraced digital humanities in 1990–2000, with first initiatives

[3] According to the UN, Western Europe comprises the following countries: Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, Netherlands, Switzerland. More information from the Statistics Division of the UN and its publication (Standard Country or Area Codes for Statistical Use, M49 standard), at: https://unstats.un.org/unsd/methodology/m49/.

dating back to the 1960s.[4] In the history of DH centre opening in Europe, a few milestones have paved the way for further developments: the establishment in 1964 of the Literary and Linguistic Computing Centre (University of Cambridge), the foundation of Centre Informatique de Philosophie et Lettres (Université de Liège) in 1983 and the first department or centre dedicated to this emergent field, the Department of Digital Humanities, Centre for Computing in the Humanities (University College London), established in 1991.

Eastern European universities seem to have started launching DH initiatives in the 2010s, at least 10–15 years after similar developments in Western European countries. In this context, a cursory look at the website of the European Association of Digital Humanities[5] reveals that, among over 220 European projects listed, very few represent Eastern European HEIs, which can be correlated with the small number of visible DH centres: the Centre for Digital Humanities at Eötvös Lorand University (Budapest, Hungary, founded in 2017), DigiHUBB (Babeş-Bolyai University, Cluj-Napoca, Romania, founded in 2015) and the Belgrade Center for Digital Humanities (Belgrade, Serbia, founded in 2009).

Departments at EE universities experience a double disadvantage that can potentially hinder innovation systemically. Traditional teaching methods are still very much prevalent (i.e., traditional academic genres produced, delivered and assessed "like in the old days"), and research related to humanities is conducted by established research groups whose main priority is not the shift towards modern approaches, which would undermine their prestige and authority. Tradition, cognitive conservatism, nostalgia and institutional inertia (Moldovan and Puscasiv 2017: 249; Schnapp and Presner 2009: 11) still dominate the EE university landscape.

3.2 Digital Humanities Survey

Since infographics regarding digital humanities initiatives in Eastern Europe are non-existent at present, we created a survey, DIGITS (Digital Humanities Survey), aimed at mapping and discussing digitalisation, particularly perceptions about digital humanities initiatives in HEIs in Eastern Europe. DIGITS was administered to scholars in the humanities from Eastern European HEIs by collaborators from universities in Bulgaria, Hungary, Romania, Republic of Serbia and Ukraine in October-November 2019. This survey collected information from the target research community concerning their digital experience in order to get a fuller understanding of digitalisation means, its implementation and the survey subjects' understanding of digital humanities.

The results of the survey revealed that scholars associated the field of DH with the existence of e-libraries or e-learning platforms at their universities, even if their university did not have a specialised centre in DH. The respondents had a few diffi-

[4] See a map developed by Tomsk State University at: http://huminf.tsu.ru/dh-map/.

[5] See the entire list at: https://eadh.org/projects.

Fig. 2 Word cloud on DIGITS responses regarding DH

culties in providing short and consistent definitions of the concept of DH (See Fig. 2). Many of them acknowledged that DH implies digital resources or technology instruments in teaching and research, for example.

- "I think digital humanities refers to the usage of digital resources in order to study certain subjects of the humanities in a different manner".
- "Using digital technologies in humanities, in presentations, publishing, research, teaching"
- "Digital humanities represents the complementarity of technology and humanities (language, literature, etc.), which aims to effectively process diverse corpora that can be explored via digital tools".

Some of the scholars also saw the long-term potential and institutional advantages offered by taking the path of this research field:

- "Providing help to researchers and teachers in humanities and perhaps making their expertise known internationally so they can better collaborate with members of other HEIs".
- "DH is about facilitating studies and research in humanities with the help of digital resources and tools available on the Internet and local nets of educational and research institutions".

Altogether, informants agreed that the juncture between humanities and technology has to be foregrounded, as it "contributes to the epistemological potential of human society in fundamental ways" (Smithies 2017: 241).

3.3 The Case of Romania

The situation in Romania appears fortunate, as reputable reform-friendly universities have launched initiatives centring on the field of digital humanities. DigiHUBB (Tran-

sylvania Digital Humanities Centre[6]) from Cluj-Napoca has already been accepted in the European Association for Digital Humanities (EADH), and in Fall 2019 the Faculty of Foreign Languages and Literatures at the University of Bucharest introduced a master's program, Digital Humanities, in English,[7] and other faculties or research centres have also been involved in DH projects. More and more inter-university networks and projects have been created, such as the INTELLIT Platform (Romanian literary patrimony preservation and valorisation using intelligent digital solutions for extraction and systematization of knowledge)[8]; the *Distant Reading* COST Action CA16204[9]; CoRoLa, the Reference Corpus of Contemporary Romanian[10]; the series of DH meetings conducted by IRH-ICUB[11]; ReaderBench[12] and the Astra Data Mining project, the digital museum of the Romanian novel of the 19th century (Baghiu et al. 2019).[13] All these initiatives focus on exploring new tools, text mining techniques and advanced natural language processing and creating digital repositories.

4 The Story of a New Digital Humanities Centre in Romania

4.1 Codhus Vision and Mission

The long-term institutional strategy of the Faculty of Letters, History and Theology of the West University of Timişoara, Romania, includes pursuing a new direction for the further development of its philology departments. In this context, a team of researchers, the majority of whom are members of the first departmental research project (ROGER 2017[14]) focusing on digital method use, founded a digital humanities centre, CODHUS (Centre for Corpus Related Digital Approaches to Humanities,

[6]More information at: https://digihubb.centre.ubbcluj.ro/.

[7]More information at: https://www.facebook.com/aslsro/photos/a.10152173484968722/10156527298718722/?type=1&theater.

[8]More information at: https://intellit.ici.ro/en/about-intellit/impact/.

[9]Which aims to create a multilingual European Literary Text Collection (ELTeC). More information at: https://www.distant-reading.net/eltec/.

[10]More information at: http://corola.racai.ro/.

[11]Morei nformation at: https://irhunibuc.wordpress.com/digital-humanities/.

[12]More information at: http://www.readerbench.com/.

[13]More information at: https://revistatransilvania.ro/mdrr.

[14]The ROGER project (Academic genres at the crossroads of tradition and internationalization: Corpus-based interlanguage research on genre use in student writing at Romanian universities) is running from 2017 until 2022 at the Department of Modern Languages and Literatures of the West University of Timişoara, Romaniamathrm; it is funded by the Swiss National Science Foundation (PROMYS grant awarded to the project coordinator, Dr Mădălina Chitez). More information at: https://roger.projects.uvt.ro/.

see CODHUS 2019a[15]) in October 2019. CODHUS is an applied DH centre supporting studies, course implementation and testing and the development of digital methods and tools (mainly corpus-based) for the humanities disciplines. CODHUS is in line with international practice, as "HEIs across the world are currently in the process of experimenting with digitalisation and applying next technologies to certain parts of their operation" (Orr et al. 2019: 10).

The motivation for the initiative resides in the need to keep up with new teaching and research developments in the rapidly evolving field of humanities. The vision of the new centre is to carry out research where traditional philological approaches should not be abandoned but rather supplemented with digital methods, content and tools. CODHUS also aims at fostering understanding of the processes related to humanities computing. The applicative character of the centre is highlighted by two directions: (a) connection between corpus-related digital methodologies in the humanities and the wider topic of applied linguistics and (b) building synergies with other disciplines (see following section) with the purpose of obtaining research results that can be effectively integrated in teaching or large-scale applications.

CODHUS is designed to be a transversal scientific organization that includes scholars and incorporates competencies from different departments. Up to the present, CODHUS has gathered researchers interested in applied linguistics, translation studies, foreign language teaching and literary studies. Other departments where expertise is sought after are dialectology, history, archaeology, geography, journalism, and political, social, and computer sciences. Working with colleagues from the IT department is essential as they are able to support the CODHUS team in developing technology-based solutions to be implemented in the research and teaching of the other disciplines.

4.2 Challenges of Founding a Dh Centre in Romania

The teaching and research at the West University of Timişoara (WUT), a comprehensive educational institution, is characterised by a mixture of traditional methods and modern innovative trends. Acknowledging that digitalisation is an essential "part of overall strategies for teaching and learning" (Orr and Rampelt 2018: 3), WUT grasped the opportunity of founding the CODHUS research and teaching-support centre and offered its valuable institutional support.

Although the majority of the teachers and decision-makers involved in the founding of the new DH centre have been in agreement as to its importance, the inclusion of new members proved to be a difficult task. This was due to a general lack of know-how in the field and reluctance towards working with new methods. This situ-

[15]CODHUS (Centre for Corpus Related Digital Approaches to Humanities) was created at the initiative and under the presidency of Dr Mădălina Chitez, Senior Researcher in the Department of Modern Languages and Literatures of the West University of Timişoara, Romania. More information at: https://codhus.projects.uvt.ro/?lang=en.

ation is similar to other centre-founding experiences: Moldovan and Puscasiv (2017) reported that "members lack[ed] . . . systemic education in digital humanities" (258) and that there seemed to be an apparent mismatch with IT stakeholders' agenda (to whom humanities seem old-fashioned) when they presented the "the story" of DigiHUBB (Transilvania Digital Humanities Centre, Babeş-Bolyai University, Cluj-Napoca, Romania).

However, in the case of CODHUS, through departmental events and workshops, several young researchers were convinced to start experimenting with digital methods and tools for the investigation of their own topics. The challenge of attracting members was overcome by opening up possibilities of research in their own areas of interest instead of proposing approaches that are completely out of their expertise.

A second major challenge is the financial and administrative support for the functioning of a new DH centre. Until the centre can be financed institutionally or through third-party grants, the use of existing funded projects as a launching pad was identified as a solution (e.g., ROGER for CODHUS). We used the expertise of the ROGER team members (especially early-stage researchers) already involved in thematic digital-intensive research, in areas such as corpus linguistics, academic writing, language teaching, translation studies and literary studies, in order to organise the first training and dissemination activities in CODHUS. They acted as digital-competence multipliers and ensured the sustainability of the initiative.

A third strategic challenge is logistical in nature: DH centres are digital labs that need generous rooms and quite expensive equipment (digital devices, manuscript printers, software programs, etc.). Solutions for CODHUS to solve this problem still need to be identified and implemented.

4.3 Good Practices

Even though at the beginning CODHUS was greeted with "an ethos of suspicion" (Ursa 2015: 81), the centre rapidly gathered attention and clustered research efforts in various directions. Since its foundation, members and collaborators have been involved in both trainings/workshops and disseminating activities.

From the very first month of existence, CODHUS members have been engaged in pedagogical practices, conducting a series of workshops for students named the Digital Linguistics Talks in Timişoara (DIGITT) series. Either carrying out practical activities regarding corpus linguistics methods with the help of online tools (CODHUS 2019b)[16] or presenting case-study results (analysis of media discourses, CODHUS 2019c[17]), the events were organised collaboratively with other departments, with the goal to innovate the faculty's teaching activities and increase stu-

[16]More information about DIGITTworld, the Digital Linguistics Workshop, is available at: https://codhus.projects.uvt.ro/news/septembrie-2019-digittworld-digital-linguistics-workshop-powered-by-roger-and-codhus/?lang=en.

[17]How do digital instruments help us in linguistic studies and in analysing discourse? More information is available at: https://codhus.projects.uvt.ro/news/december-2019-workshops-for-

dents' interest in research. DIGITT also led to numerous requests for internships in the centre.

Moreover, CODHUS has been promoting academic skill support by offering training in areas such as academic writing that contribute to scholarly success. We conducted a case study where we evaluated the efficacy of electronic feedback on texts written in Romanian (ROGER 2019a),[18] a practice that can also be implemented in other departments. Another case study, whose results can inform other disciplinary groups, concerned the use of expert corpora and digital linguistics software in discipline-specific writing (ROGER 2019b)[19] for the improvement of workspace-specific literacy skills. Also, a CODHUS expert member offered a module on "Digital tools useful in academic writing for publication" to colleagues from different departments (CODHUS 2019d).[20]

In addition, CODHUS, like any other DH centre, is particularly inclined towards cross-disciplinary studies. For example, we conducted an analysis of the election discourses in Romania (Fall 2019) using digital methods and combining digitally supported linguistic knowledge with theoretical views from political science and media (ROGER 2019c).[21]

Last but not least, CODHUS is a platform which stays connected to European initiatives, since its members participate at international meetings and conferences as agents of networking (CODHUS 2019e).[22] In less than six months, CODHUS has achieved promotion of DH practices and itself as a successful provider of digital solutions in the humanities.

4.4 Institutional Impact

A cross-disciplinary research centre, especially one that proposes digitally enabled approaches to traditional educational fields, has an impact on institutional develop-

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students-of-the-faculty-of-letters-history-and-theology-year-1-linguistics-studies-in-the-digital-era-digitt-series/?lang=en.

[18] https://roger.projects.uvt.ro/news/september-2019-the-eighth-international-conference-on-writing-analytics-academic-writing-in-digital-contexts-analytics-tools-mediality-winterthur-switzerland/.

[19] https://roger.projects.uvt.ro/news/aprilie-2019-prezentare-la-conferinta-globelt-2019-kyrenia/.

[20] Workshop "Publish or perish": competences of academic writing in English; more information at: https://roger.projects.uvt.ro/news/september-2019-the-eighth-international-conference-on-writing-analytics-academic-writing-in-digital-contexts-analytics-tools-mediality-winterthur-switzerland, https://codhus.projects.uvt.ro/news/november-2019-module-on-digital-methods-for-academic-writing-workshop/?lang=en.

[21] https://roger.projects.uvt.ro/news/november-2019-timisoara-workshops-on-research-methods-text-to-data-timisoara/.

[22] https://codhus.projects.uvt.ro/news/4-6-december-2019-the-seventh-digital-humanities-estonia-conference-use-of-digital-cultural-heritage-in-research-and-education-tallinn-estonia/?lang=en.

ment at multiple levels. In the case of CODHUS, as previously mentioned, the first results have appeared:

Creation of a research-intensive unit at the faculty level. Before CODHUS existed, it was the ROGER project that created the premises for establishing a team of full-time researchers at the Department of Modern Languages and Literatures. This was innovative in the sense that while most faculty members have until recently been engaged in research activities, they have performed these activities as part or in relation to their teaching activities. ROGER and its co-initiative, CODHUS, have thus created a different, more research-intensive environment in which further skills can be trained and integrated.

Emergence of collaborative research initiatives. As the centre was already in the planning stage, first initiatives have been taken to create "concentric circles" of shared expertise around the topics that CODHUS was promoting. This resulted in close collaborations with fellow faculty members who do not normally use the digital methods proposed by the new centre. Several joint studies have been conducted, and conference paper proposals have been produced. Some of these have been submitted for publication (e.g., comparative translation studies).

CODHUS as an expertise-building unit. The most visible effect of the centre creation has been the growing awareness that new competencies can be acquired within its framework. For example, in the six months after the official approval by the University Senate, the centre has received more than 10 applications for student internship and volunteer positions. Similarly, some of the centre's researchers have been invited to host university-level workshops that train digital skills integratively, for instance, digital skills as an integral part of academic writing skills.

CODHUS as a promoter of digital skills. The activities of the centre have been progressively changing the attitude of the faculty members, both CODHUS members and collaborators, towards the acquisition, experimentation and use of new digital methods. It has been generally acknowledged that when technology-supported teaching methods have been implemented in otherwise traditional disciplines, the learning motivation of the students has been positively affected.

Besides the results that have already been achieved, creating a digital research centre increases the chances of the university to have access to:

University funding. The creation of a research centre should also result in more funding (research centres are funded additionally) for research projects, which will, in turn, finance research-support units.

Attraction of top-level researchers. The prestige and financial sustainability of a DH research centre will attract top-level qualified researchers, which will further contribute to an increase in the university's capacity to attract funding and in its appeal to students.

Better ranking. Improving research capacity will trigger an increase in national and international rankings of the university, which will also attract more funding from the Ministry of Education.

More research projects funded. The number of approved research projects should increase considerably. For example, a quick look at the most recent list of approved projects in the humanities in Romania indicates a low rate of projects focusing on dig-

ital methodology use (out of 165 projects, only one project deals with digitalisation of data, and two projects deal with corpora). The analysis of European-approved projects (CORDIS) has also indicated a scarcity of Romania-specific research projects dealing with digital methods (or digital humanities, corpus linguistics, digital linguistics and applied humanities studies) in the humanities.

5 Digital Humanities as an Incentive for Digitalisation Strategies

5.1 Digital Innovation Through Digital-Intensive Research Methods

The White Paper *Bologna Digital 2020* (Rampelt et al. 2019) suggests that digital education can be best achieved through learning and teaching strategies. An additional pathway that can enhance the impact of the digitalisation-related policies is the integration of digital-intensive research: "The full potential of digitalisation has not been reached on systemic level. This is partly due to digitalisation being viewed as an additional challenge, rather than a means to meet existing challenges for higher education" (Orr et al. 2018). Why digital-intensive research? For two main reasons, both of them concurring to create the premises for the acceleration of the *Bologna Digital 2020* pace of implementation:

Digital-intensive research automatically triggers the use of the latest technologies, tools and methods. In this context, we define digital-intensive research as research in which either digital methods or tools prevail (e.g., the use of digital methods for the collection, analysis and evaluation of data), or the end result of the research process is a digital product (e.g., digital methodology, digital tool). It is also important to understand the limits and potential of the notion of "digital": We see it as a continuum (see Fig. 3) starting from standard digital literacy skills to complex abilities involving the use and manipulation of digital tools and technologies.

One could argue that all research nowadays is digital, considering the indispensability of digital means (such as communication and information-extraction platforms and software) for the latest discoveries in science and technology, but we should also include disciplinary distribution of digital skill expertise into the equation: Disciplines such as ICT, information management, engineering and economics are at the core of the digital-intensive discipline range, and disciplines such as biology, chemistry and health involve both classic (e.g., lab experiments) and digital (e.g., data processing) activities, whereas disciplines such as the humanities still primarily rely on traditional research methods (e.g., perspective-based comparative studies). For this reason, delimitations within the digital skill continuum are meant to clarify the degree of sophistication with which digital users (students, teachers, researchers and the wider public) operate.

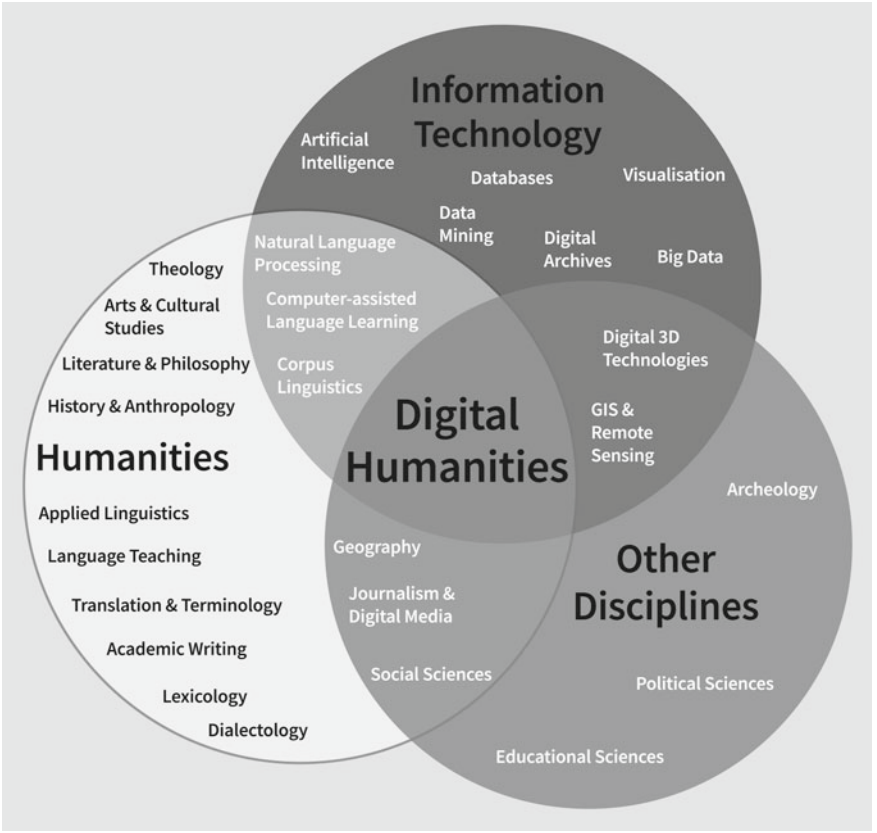

Fig. 3 Continuum of digital skills integrating digital-intensive research skills

Digital-intensive research agents (e.g., researchers, HEI teachers) act as multipliers of digital competences. If more and more scholars were undertaking research that incorporates digital-intensive methods, they would likely be exposed to training in new skills, start re-thinking their approach towards their disciplines and import innovative methods and technologies into their everyday teaching activities. Thus, students would have instant access to the latest developments and digital competence-building strategies. By this, we do not mean only training in basic digital literacy skills (e.g., work with digital information systems, communication and task fulfilment via e-learning channels), but also students' hands-on practices of discipline-specific digital tools and methods (e.g., linguistic analysis tools, literature visualisation apps) that have a high motivational impact for learners (see Tong et al. 2018).

European education, including research, has to go digital: This is a desideratum of all decision-makers on the continent. Major steps have been taken to make it a reality, and digitalisation is prioritised in one of the European Commission's Multian-

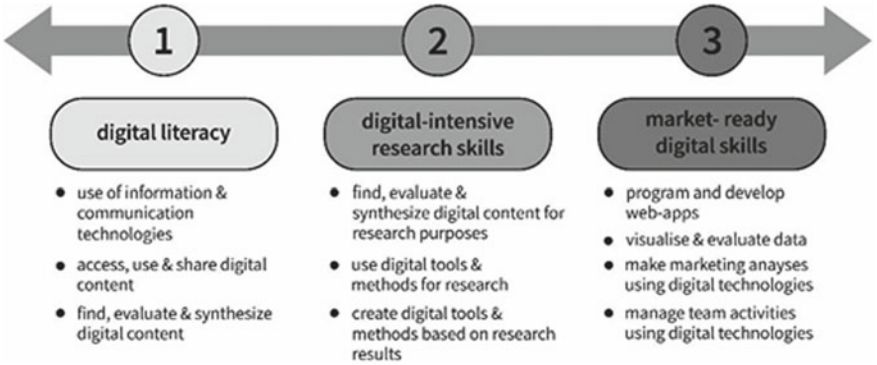

Fig. 4 Cross-disciplinary convergences within DH

nual Financial Frameworks (Digital Europe Programme, 2021–2027[23]). Awareness seems to have been raised towards practical strategies, turned into financial-support actions for research initiatives, which could potentially lead to an efficient and rapid implementation of the ongoing digitalisation processes. Digital humanities centres will only benefit from such strategies, with their impact potential (see also previous section) manifesting in both research and digitalisation achievements.

5.2 Cross-Disciplinary Convergences

As previously stated, digital humanities is a research-intensive, cross-disciplinary field. The range of possible discipline combinations to fall under the purview of "digital humanities" is quite broad (see Fig. 4). A quick look at the project section of the webpage of the European Association for Digital Humanities[24] reveals the "heterogeneous knowledgescape" (Papadopoulos and Reilly 2019) of the domain.

The particular nature of each centre is determined by its scientific or applied objectives. Many DH centres have been preoccupied with the digital preservation of cultural assets, such as the digital archive of literary studies (e.g., RCH, Athens, Greece[25]), the online repository of old and modern manuscripts (e.g., projects of UCLDH, London, UK[26]) or databases of artistic works (e.g., Centre for Digital

[23]More information at: https://ec.europa.eu/digital-single-market/en/news/digital-europe-programme-proposed-eu92-billion-funding-2021-2027.

[24]More information at: https://eadh.org/projects#block-views-project-list-block-1.

[25] Webpage of the Research Centre for Humanities, Athens, Greece: https://www.rchumanities.gr/en/our-mission/.

[26] Webpage of the UCL Centre for Digital Humanities, London, UK: https://www.ucl.ac.uk/digital-humanities/projects.

Humanities, Göteborg, Sweden[27]). Quite often, DH units/labs/centres have placed the methodology of corpus linguistics at the core of their research profile, as they conduct projects that use or compile corpora, in other words, computer-processed linguistic databases that can be used for lexico-grammatical searches and quantitative analyses with the help of software programs (self-developed or available) whose complexity varies from simple intuitive interfaces to specific syntax queries (e.g., SQL). Other centres have opted for a well-defined computational direction in which big data and data analytics projects dominate (e.g., Data Intensive Digital Humanities, Kalmar/ Växjö, Sweden[28]). The mission of all these centres is to include a wide variety of disciplines with a view to stimulate convergences towards the latest research topics:

> We believe that information scientists; literary theorists; media scholars, designers and practitioners; social scientists and historians can collaborate to develop humanities and social science research—to explore the human condition and its evolution, and the social and material worlds we make. We wish to make the humanities fit for purpose in a digital age. (Sussex Humanities Lab; source: webpage, n. d.)

Essentially, the DH field brings together the two major disciplines that have for a long time worked independently: humanities and information technology. The sub-disciplines in the humanities that have quite frequently been encompassed in the DH area include language studies, literature, education studies, history, geography, culture, art and design studies. Geoinformatics and natural language processing technologies have been, on the other hand, the sub-disciplines of information technology that have been quite often integrated into DH studies.

5.3 A Synecdoche for New Learning Models

The strategic planning efforts of EE universities seem to indicate that they are interested in improving the quality of teaching being offered in order to prepare students for the new digitized workplace and strengthen their economic position, thus reaching competitive levels of development. The digital-intensive research initiatives of Eastern European HEIs are representative of the struggle for digitization in the region since they offer the possibility to reflect upon the cultural and social dimensions of strategies that create an innovative bond between computational skill and the disciplinary research areas.

From this perspective, any DH centre or initiative "is fairly well understood as a mechanism for advancing individual research goals, supporting faculty enrichment, striving for institutional alignment with scientific paradigms for enterprise-level research" and as a hub for training (Opel and Simeone 2019). Such centres

[27] Webpage of the Centre for Digital Humanities, Göteborg, Sweden: https://www.ucl.ac.uk/digital-humanities/projects, https://cdh.hum.gu.se/english.

[28] Webpage of the Data Intensive Digital Humanities within Linnaeus University Centre for Data Intensive Sciences and Applications, Kalmar/ Växjö, Sweden: https://lnu.se/en/research/searchresearch/data-intensive-digital-humanities/.

represent "precisely the place where this professionalization work can take place, as a site of experiential, cross-disciplinary, cross-rank, academic-industry collaboration", "a space of contact for graduate students from the humanities and STEM disciplines who are approaching issues of shared concern" (ibid.) and a space of contact for both "digital natives" and "apprentice-research assistants" (Murphy and Smith 2017), creating a network of "decentralized learning and teaching processes [along with research strategies] which are detached from spatial and temporal constraints" (Heidkamp and Kergel 2018: 43).

5.4 Synergies with the Bologna Strategy

Digital competencies have become indispensable qualifications of a successful student or academic. A new DH centre supports the development of such qualification while pursuing several major objectives. In fact, many of them intersect with the aims of the Bologna Process: Building expertise in digital method use in teaching and research in the humanities contributes massively to the enrichment of the digital skill portfolio of both students and teacher-researchers. Currently, students, faculty members and researchers need to be interconnected via the Internet and need to use mobile applications, computer-mediated tools and interactive platforms in order to obtain/exchange information, practice/deliver/assess learning content, compile/analyse datasets and, ultimately, design/test/construct new digital products.

Even though digital-intensive research is not directly related to the policies proposed by the Bologna Process (such as ECTS and digital transcripts of records), it encompasses the use of computing infrastructures that enable the transfer from raw information to scientific outputs. "Sharing of database, IT infrastructure, knowledge and skills and much more" (Gupta and Muller-Birn 2018: 1663), associated with digitalization, are aspects that offer numerous improvements that engage both teachers and students in taking further steps towards the Europe of Knowledge. Dominated nowadays by the digital turn, HEIs' dynamics reveal that digitally enhanced environments contribute to organizing, processing, and analysing data and knowledge; facilitating higher visibility, transparency and accessibility for students from all backgrounds; creating equality for all learners, allowing comparable degrees and qualifications; and allowing for cooperation in quality assurance and harmonisation of the measures used in this process. All of these aspects succeed in providing a learner-centred and open HEI (focal points of the Bologna Process): an "education area with digital solutions" (Rampelt 2019). Moreover, the Bologna Process brings an increased demand for innovation and excellence in teaching and learning, which cannot be achieved without high quality of scientific work and research (Aparacc-Jelusić 2016: 76).

6 Conclusions

Digital humanities centres have the chance to become powerful education-support environments favourable to the proliferation of digital competences. At Eastern European HEIs in particular, any type of digital-intensive research strategies could foster developments in implementing digitalisation policies, thus echoing broader transformational changes. In our study, we have assessed the potential of DH centres, with a particular focus on EE systems, to act as an incentive for further progress in digitalisation reforms.

In order to do that, we have presented the challenges and opportunities in founding the CODHUS DH centre at a Romanian university. We envisage CODHUS to be a replicable project in any other EE university. The newly founded DH centre, like numerous others which have been more and more active and prominent lately on the European continent (see, for example, the project database of EADH[29] or ACDH-CH[30]), has an immense impact potential at the institutional level. Among other benefits, it facilitates cross-disciplinary collaborations in breakthrough areas while simultaneously creating visibility for international networking that can result in digital training and expertise building.

Launching such digital-intensive initiatives in the humanities aims at filling a Bologna Digital strategic gap by empowering research agents with the role of facilitating the access to and training and expertise building in digital methods and tools. Prioritizing the involvement of early-stage researchers can lead to their engagement as multipliers of excellence in their home institutions and countries. In our view, building research capacity that relies heavily on digital competences in humanities departments, especially in Eastern Europe, can have a bootstrapping effect on the Bologna Digital strategy at the regional level. Their existence should encourage the adoption of the latest developments in digital methods and tools, including the ones aimed at improving basic digital literacy skills in a change-reluctant research community, both as a historical-geographical group, i.e., the EE educational system, and a cultural-disciplinary group, i.e., the humanities. We argue that the founding of a DH centre is as a practical and effective digitalisation-promoting strategy that contributes to the rapid improvement of digital skills and technology-enhanced research expertise of all research agents—researchers, university teachers, and students—and their close academic environment.

[29] More information at: http://eadh.org/projects.

[30] More information at: https://www.oeaw.ac.at/en/acdh/acdh-home/.

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