The Implementation of Digital Humanities in the State Islamic University Libraries in Indonesia

Labibah Zain1, Ahmad Anwar2, Marwiyah3, Ida Nor‘aini Hadna4, Komarudin5, & Ilma Nabilla Ashfia Hannum6

1,2,3,4,6Universitas Islam Negeri Sunan Kalijaga Yogyakarta, Indonesia
5Institut Agama Islam Negeri Kediri, Indonesia
Correspondence email: labibah@uin-suka.ac.id

Information

Submitted: 01-08-2023
Revised: 08-02-2024
Accepted: 12-02-2024

DOI: 10.24252/kah.v12i1a4
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ABSTRACT

State Islamic University libraries are striving to become research libraries. Since humanities are the core discipline in most State Islamic Universities, a new service concept—digital humanities—has been introduced to support research activities. This study explores the implementation of digital humanities in three State Islamic University libraries: UIN Sunan Kalijaga Yogyakarta, UIN Syarif Hidayatullah Jakarta, and UIN Maulana Malik Ibrahim Malang. This research employs a qualitative methodology, utilizing data collection techniques such as interviews, observations, and documentation. The findings reveal that while the libraries have sufficient librarians, their involvement in research activities is not extensive or proactive. Additionally, the facilities and infrastructure necessary to support digital humanities are inadequate. Although policies supporting digital humanities exist, there is a lack of strategic programs to explore and fully enhance library use and involvement in research. Furthermore, internal cooperation between institutions has been established but remains limited, indicating a need for libraries to adopt a more proactive role. These insights underscore the challenges and opportunities in implementing digital humanities within State Islamic University libraries, providing a foundation for future strategic initiatives to enhance their research support capabilities.

Keywords: Digital humanities; academic library; research library

1. INTRODUCTION

Indonesian universities are characterized by their obligation to perform what is called Tridharma Perguruan Tinggi (the Three Pillars of Higher Education: Teaching, Research, and Community Services). The Indonesian Republic Constitution, Number 12, Year 2012, states that the Mission of Indonesian Higher Education is to deliver education, perform research, and serve the community. Indonesian universities should function as more than teaching centers to fulfill this obligation. Besides, it is important to remember that research is crucial in university
education. It is also a very essential skill for the lecturers, with which they can develop their academic career.

Universities in Indonesia research to support their teaching-learning processes and develop the knowledge they teach (Yuliawati, 2012). In this case, university libraries play an important role by providing necessary resources for conducting research. In that sense, the Library Constitution states that a university library has to have adequate collections of resources to support education, research, and community service activities.

Likewise, a university library must provide research and information dissemination services. The concept of research service has been developed in developed countries' libraries such as the University of Cambridge Library, Pennsylvania State University Library, University of Tennessee Library, and Library of Massachusetts Institute of Technology. One of the available research services in these libraries is the digital humanities service.

For Indonesian researchers, digital humanities may be a new research perspective. According to Pamungkas (2016), digital humanities study is concerned with the exploration of recorded materials (digitized material and born-digital material) that affect human life (humanities). Furthermore, Chen, Chang, & Chen (2021) stated that digital humanities is concerned with using digital content and tools in the humanities discipline. It gives rise to a new type of research, in which digital humanities becomes a meeting place between digital technology and the humanities disciplines. Therefore, digital humanities is dependent on the use of information technology, including the use of digital information sources.

As the center of the source of information, a university library, with its various collection materials, including digital content, should contribute to developing digital humanities. It can facilitate the teaching-learning processes as the Tridharma of Higher Education recommends. Thus, it can also improve the academic atmosphere (as recommended by the Head of National Library Regulation, Number 13, Year 2017). Therefore, as university libraries, State Islamic University libraries must also develop digital humanities.

Jakarta State Islamic University, Yogyakarta State Islamic University, and Malang State Islamic University were the first Islamic educational institutions to convert from State Islamic Institute to State Islamic University. In this transformation process, many changes happened, both in academic and physical aspects. New facilities, such as integrated laboratories and libraries with new information technology systems, were built. It has been fifteen years since these Islamic educational institutions converted to Islamic universities. It is, therefore, necessary to see how these libraries work to satisfy the demands of the academic community, including its role in developing digital humanities. Besides, it is necessary to study the preparedness of the State Islamic University libraries to develop digital humanities services. This study examines the implementation of digital humanities concepts in the three State Islamic University libraries mentioned above.

Research on digital humanities has been carried out with a diverse focus following the developing issues in the technology field, such as research conducted by Alvite-Diez & Barrionuevo (2020). Their study demonstrated the relationship between heritage documents, library science, and digital humanity through a systematic review of representative scientific publications published from 2013 to 2018. Likewise, Zhang et al. (2015) research aimed to find a productive way for library and information science professionals to support digital humanities scholarship, especially those related to digital library components. That includes content, technology, and services that can be developed for digital humanists. Another research conducted by Fay & Nyhan (2015) used a qualitative approach, including a literature review, Webb on the web case studies, summary and analysis of user test results, and critical analysis of the collaboration.
**Digital Humanities**

Digital humanities has a wide range and is difficult to define despite the limitations that include computational research, digital reading materials, and writing platforms (Smithies, 2017). Some experts gave various limits. Chen et al. (2021) explained that digital humanities research involves analyzing, understanding, producing, and sharing many digital resources with the support of digital devices. On the other hand, when doing research, digital humanities depend on technological use, such as text mining, annotation, social network analysis, geographic information (GIS), and natural language processing (NLP). These are used to analyze data from digital sources, extract useful information, and generate new knowledge.

It is important to remember that “digital humanities” is not a new field that emerged spontaneously. Moreover, it is just improving, and the improvements that occur in digital humanities are a consequence of the approaches that have been used for a long time (Le Deuff, 2018). The themes of digital humanities that have strengthened since the early 20th century are a combination of social sciences and mathematics (as well as linguistics, statistics, sociology, and information science) and examining the consequences of deep thought on documentation issues (Le Deuff, 2018). In other words, it involves analyzing how complex ideas and theories affect how information is documented and organized within the digital humanities domain.

According to Presner, the first wave of digital humanities in the late 1990s – early 2000s focuses more on large-scale digitization projects and technology infrastructure development (Berry, 2012). Meanwhile, in the second wave, the concept of Digital Humanities 2.0 emerged. This is more generative, creating the environment and tools for generating, curating, and interacting with the knowledge that is “born digital” and lives in various digital contexts. However, there is a difference in emphasis between the first digital humanities wave and the second.

In the first wave, digital humanities placed less emphasis on text analysis (e.g., classification systems, mark-up, encoding, and scholarly editing) in more established disciplines. While Digital Humanities 2.0 introduced the paradigm of the discipline as a whole, convergent science, hybrid methodologies, and even new publication models that often come from a print culture (Berry, 2012). In its development, there are ten digital humanities modes: digitization, crowdsourcing, archives and databases, digital curation, text editing, visualization, geospatially, gaming, and code. This shows that the development of digital humanities involves many things, including engineering, digital, and humanities studies. Therefore, digital humanities emphasize interdisciplinary studies supported by other important elements, such as collaboration.

**Libraries and Digital Humanities**

Digital humanities is an area that covers the systematic use of digital content and tools in the humanities disciplines. This gives rise to the intersection of digital technology and the humanities disciplines. Therefore, digital humanities depend on information from technology, including digital information sources. Thus, libraries, as the center of information sources, should have an important role in digital humanities.

According to Posner, the concept of digital humanities is rooted in libraries, which provide supporting sources for digital humanities (Poole, 2017). This is inseparable from the library’s function as an information center that provides various sources of information to support research. In addition, libraries’ important role in digital humanities is also marked by the development of technology used in libraries, such as online public access catalogs (OPAC) or online catalogs, which were first developed in university libraries in the 1970s (Smithies, 2017). For researchers, digital tools are important in supporting their research tasks. Therefore, changes from traditional to digital are crucial, such as changing catalog cards to OPAC and web browser cards (Smithies, 2017).
However, in line with the development of the digital humanities field, it also demands the development of technological infrastructure and this is a challenge for libraries that still have a traditional culture. It demands a new field of work for librarians. Librarians are also encouraged to have the skills needed to support tasks related to digital humanities. They can even take on the role of content creators and providers. As curators who provide facilities, ensure sustainability and access. As instructors and consultants, the right and successful strategy for libraries and librarians includes interacting with social media and professional organizations and building digital humanities work rooted in library strengths such as consultation, instruction, and experimentation (Poole, 2017).

Libraries are also an important element in conducting digital humanities research, among other elements, as shown in the checklist developed by 4humanities for universities. That will accommodate digital humanities research, namely: (1) digital media project, (2) collaboration with internal and external parties (other universities) with supporting facilities, (3) web service, (4) advanced computing supports, (5) research governance, (6) access preservation of data in libraries, and (7) computing services.

2. METHODS

This research used a qualitative method to comprehensively explain the objective of the research, which is the implementation of digital humanities services in the State Islamic University libraries. The subjects for this research are three State Islamic University libraries: UIN Sunan Kalijaga Yogyakarta, UIN Syarif Hidayatullah Jakarta, and UIN Maulana Malik Ibrahim Malang. These three libraries are accredited, and it is assumed that digital humanities (DH) will be easier to implement in these high-ranking universities, considering DH is a new concept in Indonesia and they are ready for implementation in digital humanities. Besides, these three universities have offered library science programs that are assumed to be able to provide fresh ideas through research conducted by the LIS students. Thus, they are more receptive to new possibilities. On the other hand, the library is a student laboratory for the library science programs. Hence, readiness for digital humanities elements can be measured.

This research started by collecting DH checklists developed by 4humanities for universities, followed by online observation through the three UIN library websites. From this observation, a competencies component has been added as suggested by Poole (2017) and categorized the 4humanities checklist components into five, such as (1) competencies and expertise of human resources empowering DH activities, (2) web and digital facilities covering web services, advanced computing support and services, and access preservation of data in the libraries, (3) institutional support affirming research governance, (4) collaboration with internal and external parties, (5) activities related to digital humanities covering digital media project (Poole, 2017).

Data collection techniques used in this research are interviews, observations, and documentation. In the interviews, a semi-structured method was used to encourage more in-depth answers because researchers can develop more questions outside the interview guide that has been made. The informants of this research are the head of UIN Malang Library, the head of UIN Jakarta, and the deputy head of UIN Yogyakarta. The Miles and Huberman analysis technique was also used, which included data reduction, data display, and conclusion drawing/verification. These findings were then compared with the concept of digital humanities services, forming the implementation of digital humanities services at the State Islamic University Library.

So, the conceptual framework of the research can be described as follows:
3. RESULTS AND DISCUSSION

Results

The university libraries are integral to any university’s carrying out the Tri-dharma, which consists of teaching, research, and community service. They also have educational functions, research partners, and recreation and play an important role in knowledge preservation. Thus, DH has an important function in research activities and knowledge preservation. Pamungkas (2016) explains that digital humanities studies include the exploration of materials recorded both through the digitalization process (digitized materials) and born-digital materials that affect human life (humanities).

Based on data collected from the libraries of UIN Sunan Kalijaga, UIN Syarif Hidayatullah Jakarta, and UIN Maulana Malik Ibrahim Malang, the following are the results for implementing digital humanities (DH).

Competency and Expertise of Librarian & Library Staff

Librarians and staff working in the three UIN libraries already have some of the competencies needed to support digital humanities, such as the skill to help users access electronic resources, especially the library’s resources. The librarians and staff also assist with their best practices in preserving and storing all data management plans. In addition, librarians also have supporting competencies such as mentoring skills when users ask for help (for example, accessing the e-journal database), the skill to conduct research shown by the papers published in scientific journals, even some librarians of UIN Sunan Kalijaga collaborate with lecturers in research.

Furthermore, librarians possess negotiation and communication skills, especially the head librarian and the head division, whose job revolves around negotiating and communicating with various parties. For example, the procurement division needs to negotiate with the university head and vendors to acquire new materials and communicate with users to purchase the book titles they need. Likewise, librarians need to have teaching skills to take library literacy classes where the patrons learn various matters regarding accessing the library’s collections and services. These three universities already have librarians with teaching skills, usually practiced during library activities such as user education (for new students, teaching how to use reference management and how to access electronic resources).
However, the libraries have not yet acquired a digital management specialist librarian. UIN Malang and UIN Sunan Kalijaga Library have IT staff to perform tasks relating to IT (digitization, programming, etc.). Only UIN Jakarta has a librarian who specializes in IT. Even so, this librarian is also not specifically responsible for digital management.

**Web and Digital Facilities**

Web and digital facilities have been implemented numerous times in the 3 UIN libraries. The first instance is an online Institutional Repository to store research collections, articles, and other works from lecturers and UIN students. This shows that lecturers and students trust the library to store their works in the library repository. The repository is supported by a policy from the university head, urging all to store their academic work electronically in the library so that users can easily access it. In terms of updating the repository data, the academic community in each institution can do self-archiving, a procedure to store scientific work independently in the institutional repository. Self-archiving can be done directly through the system, like in UIN Syarif Hidayatullah and UIN Maulana Malik Ibrahim, or other applications, like in UIN Sunan Kalijaga.

Besides repository development, all the libraries involved in this research already use Library Management System (LMS) software for collection management and information retrieval. However, each library uses a different Library Management System software. For example, UIN Sunan Kalijaga Library uses SIPRUS (Sistem Informasi Perpustakaan), UIN Syarif Hidayatullah uses TULIS (Technology of UIN Library and Information System) and UIN Maulana Malik Ibrahim uses SiLMS (Senayan Library Management System). It is also important to note that the three UIN libraries have committed to further developing their institutional repositories.

The second instance is the library webpage, which the three UIN libraries already have. A library web page plays an important role in distributing information to users and providing links to the library's electronic information sources, such as the e-journal database, IR local content, and ebooks. Information distribution is also done via social media (Instagram, Facebook, Twitter and YouTube), especially regarding announcements, library activities, and information about access to collections and services in various formats, such as videos and infographics. In this case, social media is a medium to promote libraries, as Syarif Hidayatullah Jakarta Library does. This library uses Twitter to promote repository content. UIN Sunan Kalijaga Library has the most active social media.

Accordingly, OPAC is also important in supporting digital humanities because it is the gateway to library collections. However, OPAC’s design is still insufficient, except in UIN Syarif Hidayatullah, which has a more complete design with simple and advanced search facilities and facilities to narrow search results. Meanwhile, the OPAC at UIN Malang and Yogyakarta still needs further development. In addition, the three UIN libraries have not yet acquired the tools/software to support research on digital humanities, such as digital humanities software for data visualization, file conversion, mapping, text analysis, and transcription. The only tools they provide are scanners, which are important for digitizing the print collection, but the scanners can only be used by librarians, not users.

**Institutional Support**

As for financial support, the three UINs have received support from their universities; for example, financial support for the repository development was given through an incidental budget. Other support came from internal institutions, namely the Institute for Research and Community Service (LPPM), which allows librarians equal opportunities as lecturers in acquiring research funds from UIN. This became a great opportunity for librarians to develop their research skills. Furthermore, libraries work together to provide access to lecturers' research results.
Collaboration

To support the implementation of digital humanities in UIN Yogyakarta, Malang, and Jakarta, it is required to collaborate with various internal and external parties. UIN Sunan Kalijaga enforces an integrated system as a form of internal collaboration. Internal collaboration is carried out with institutions within UIN through the human resources development department. Some policies obligate lecturers to store their scientific work online in the institutional repository as a requirement for a promotion. This obligation urges lecturers to update their research in the institutional repository library, adding more variety to the library's e-resources collection. The same obligation also applies to students. Through collaboration with the Academic Affairs department, the library created a policy that requires students to submit the results of their final research (thesis) to the library to be stored in the Institutional Repository. These two policies support the implementation of DH in libraries in the form of a research result collection that can be accessed widely via the library.

In addition, this library also collaborates with the Quality Assurance Agency (Lembaga Penjaminan Mutu) to advocate program study accreditation. The existence of a library that supports all study programs having wider collections is an important component in the accreditation assessment of study programs and institutions. So, it is necessary for the library and agency, as the institution responsible for the accreditation process, to collaborate during the accreditation process. It should be noted that the 3 UINs have already collaborated on this research.

For example, in collaboration with external institutions, the three library universities have joined the Association of State University Libraries (FKP2TN) to collaborate with other libraries. One form of collaboration related to DH is sharing resources through the “Sakti Card.” This is an important key in providing access to collections and library services in all state university libraries in Indonesia. In addition, the three UINs also cooperate in research advocacy activities through APPTIS (Islamic University Library Association).

Likewise, these three UINs also collaborate externally. They collaborated with various external parties to establish corners such as the Iranian Corner, a form of collaboration between the libraries and the Iranian Embassy in Indonesia. The Iranian corner serves as a space to share collections and do activities to introduce Iranian culture and other resource sharing. Similarly, the libraries work together to establish another corner, namely the Bank of Indonesia Corner, a collaboration with the Bank of Indonesia, and the Canadian Corner, which provides collections about Canada and human resource sharing.

Activities Related to Digital Humanities

The three UIN libraries have already carried out activities related to digital humanities. The first activity is digitization done by UIN Sunan Kalijaga Yogyakarta by converting their printed book collection to an electronic form. So, the electronic collection can be accessed by users with visual impairment having converted text to audible text. Digitization is also done by UIN Malang Library and UIN Jakarta Library, following the needs of lecturers’ scientific works. Another supporting activity that these libraries have implemented is user education. It is an orientation activity to introduce users to the library’s service and collection, reference tools, training online research skills, and correctly using academic references.

The librarians regularly do these library literacy classes to support students in their research activities. User education is given to new students to introduce library services and collections and teach them how to access these collections and services. Meanwhile, training on reference tools, academic references, and online research skills is given to students at a higher semester who are ready to conduct research, and even lecturers are also allowed to attend this training session. Likewise, to support research activities within the university, these libraries also provide tools for conducting research, such as Mendeley, Zotero, and similarity checkers. These three tools help students and lecturers alike with their research activities.
On the other hand, librarians are always ready to help lecturers and students if they encounter difficulties using those tools. UIN Malang, Jakarta, and Yogyakarta libraries still need to improve services, especially in providing specific tools to support digital humanities projects.

The results of this research are described in the following table.

**Table 1. Research results**

<table>
<thead>
<tr>
<th>No</th>
<th>Components</th>
<th>Sub Components</th>
<th>UIN Sunan Kalijaga</th>
<th>UIN Syarif Hidayatullah</th>
<th>UIN Maulana Malik Ibrahim</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Competency and expertise of human resources (Librarian &amp; library staff)</td>
<td>1.1 Librarians can help find texts/electronic collections</td>
<td>v</td>
<td>v</td>
<td>v</td>
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<tr>
<td></td>
<td></td>
<td>1.2 Availability of a digital management specialist librarian to help with the digital project aspects (digitalization)</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td></td>
<td></td>
<td>1.3 Librarians/library staff can assist with their best practice in preserving and storing all data management plans (research data)</td>
<td>v</td>
<td>v</td>
<td>v</td>
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<td></td>
<td></td>
<td>1.4 Librarian/library staff have the following supporting abilities</td>
<td>1.4.1 Technical/programming skills</td>
<td>v</td>
<td>v</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1.4.2 Negotiation and communication skills</td>
<td>v</td>
<td>v</td>
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<td></td>
<td></td>
<td></td>
<td>1.4.3 Knowledge base (digital humanities or humanities)</td>
<td>x</td>
<td>x</td>
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<td></td>
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<td></td>
<td>1.4.4 Leadership skills</td>
<td>v</td>
<td>v</td>
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<td></td>
<td></td>
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<td>1.4.5 Mentoring skills (one-to-one, personal teaching according to need/case)</td>
<td>v</td>
<td>v</td>
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<td></td>
<td>1.4.6 Teaching skill</td>
<td>v</td>
<td>v</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1.4.7 Research skills</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>2</td>
<td>Web and digital facilities</td>
<td>2.1 Digital Repository</td>
<td>2.1.1 Digital collections/repositories owned by the library</td>
<td>v</td>
<td>v</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2.1.2 be trusted by researchers/lecturers, and students to store research papers, presentations, and data so that they can be accessed widely</td>
<td>v</td>
<td>v</td>
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<tr>
<td></td>
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<td>2.1.3 The practicality of using the repository: do you need permission for each deposit</td>
<td>x</td>
<td>v</td>
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<td></td>
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<td>2.1.4 Library commitments for long-term provision in service repositories</td>
<td>v</td>
<td>v</td>
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<td></td>
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<td></td>
<td>2.2 Library page/web:</td>
<td>2.2.1 Owns a website</td>
<td>v</td>
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<td></td>
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<td></td>
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<td>2.2.2 The library website can store a researcher’s/lecturer’s project resources</td>
<td>v</td>
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<td></td>
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<td></td>
<td>2.3 There is an information retrieval system: OPAC and a repository</td>
<td>v</td>
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<td>2.4 The library has a social media</td>
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<td></td>
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<td></td>
<td>2.5 The library provides tools/software to support research on digital humanities</td>
<td>x</td>
</tr>
<tr>
<td>3</td>
<td>Institutional Support</td>
<td>3.1 Open access policy at a university level</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.2 A policy that encourages researchers to store research results in the institutional repository so that they can be accessible</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
</tbody>
</table>
3.3 Funds 3.4. Building awareness regarding digital humanities 3.5. Policy Related to Digital Humanities 

4  Collaboration 4.1 Collaboration with various relevant parties (internal and external) 

5  Activities related to digital humanities 5.1 Existing library activities that relate to digital humanities 5.2 Tools that are used in those activities 

Source: adapted from Kamposiori (2017) & 4humanities (2013)

From the description of the table above, it can be seen that the three UIN libraries have the potential to implement digital humanity services because they are supported by sufficient human resources (librarian and library staff), web facilities, collaboration, and institutional support. Unfortunately, there is currently no policy for digital humanities at either the central library or university level.

4. CONCLUSION

The digital humanities in UIN Sunan Kalijaga, UIN Syarif Hidayatullah Jakarta, and Maulana Malik Ibrahim Malang libraries have begun to be implemented at a practical level. However, the implementation is limited to repository management, website, and social media, information source searching, and knowledge preservation. Meanwhile, regarding policy and awareness-building efforts, the central library and university programs have not explicitly stated a vision related to digital humanities. Yet, the digital humanities activities are not well planned in these libraries. The three libraries have not yet acquired software and hardware that supports digital humanities. They only have scanners that are used for processing purposes. However, scanners, printers, GIS (geographic information system), SNA (social network analysis), interactive games, and interactive multimedia are all important tools in applying digital humanities.

Despite lacking those tools, each library in the three institutions is shown to be capable of working in the digital humanities field. However, this existing capability is still on a feasible level. It must be updated continuously to become a proactive digital humanities activity, especially publishing competency and outreach activities. Besides, the three institutions have not yet acquired any competency in the Digital Management System field, an important element in digital humanities.

The study recommends the following. First, university libraries within the Islamic State University, through the Islamic University Library Association, should propose digital humanities platforms for policy and practical implementation. Second, research ethics policies must be initiated to protect respondent data. Without protection, it greatly affects the dissemination of research, an important element in digital humanities. Third, the Islamic State University libraries environment should advocate for human resources and infrastructure procurement that supports digital humanities.

Acknowledgment

This research is funded by Islamic Higher Education of the Ministry of Religious Affairs.
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