Improving scientific publication using eprints framework

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Abstract. Technology is used as a media for publishing digital content from various new researches and innovations in the world of Education. Thus, the results of this publication can be accessed and quoted by the public, and this is a concept from a digital library. This paper is an architecture that provides a platform for writers and editors to process in making articles on eprints framework. This paper is intended to examine the advantages of using the eprints framework. The research method is done by taking data directly from the Information Technology Unit and the Central Library through interviews, to ask direct questions with stakeholders about business processes and literature studies.

1. Introduction
At present many of the results of research and sources of knowledge are made in digital form. As a result, more and more institutions and organizations understand the need for a reliable place where these resources can be stored and easily accessed. Many articles, reports, experimental results, datasets, media data created by institutional divisions are placed on individual hard drives or division web servers. Such data is often lost forever after institutional restructuring. Furthermore, many published works are available after a long period because they are finished. That is why the concept of digital library systems is very important [1]. Digital library, Institutional repository, open archives, etc. Is a current keyword, which allows users to access digital information and sources of knowledge for different purposes [2].

Digital libraries refer to collections which are electronic sources, accessible through the World Wide Web. These often contain electronic versions of books, photos, videos that are owned by "physical" libraries [3]. The digital library management system provides a framework that is suitable for both production and administration. Digital library systems incorporate functionality that is essentially important for digital libraries and also provides sophisticated software integration [3]. The digital library itself is part of an information system.

Information systems develop massively and quickly in almost every line [4]. No exception, universities use information systems to support the management process. The use of information systems as a support for the organization cannot be denied anymore, where every part of the organization is expected to be able to provide fast and accurate services to each end user [5].

This digital library is needed by a researcher to publish his work which shows its existence in research. The number of publications is the first criterion for assessing researchers' output. However, the main measurement for author productivity is the number of citations, and quotes are usually related to article visibility [6-10]. Thus, the selection of a digital library that supports increased...
visibility is very necessary. One of the digital library service providers is Eprints framework. Eprints are open access (OA), so users can freely use them according to the GNU license.

Based on the description above, it is considered very necessary for Semarang State University (UNNES) as PTN BLU to develop a digital library that can support researchers in the UNNES environment to publish works and increase the number of their cites.

2. Method
Information system integration is a process that is used to connect software applications functionally. There are various techniques for doing so, such as web services, process, and workflow management, etc.

The integration process of Eprints and LDAP was developed using the RAD method

![Figure 1. RAD method](image)

Based on Figure 1, the RAD approach covers phases:

a) Business Modeling
Information flow between business functions is modeled in a way to answer the following questions: What information controls business processes? What information is raised? Who gave it up? Where did the information go? Who processes it?

b) Modeling Data
The flow that is defined as part of the business modeling phase is filtered into the data objects needed to support the business

c) Modeling Process
The flow defined in the data modeling phase is transformed to achieve the information flow necessary for the implementation of a business function.

d) Application Generation
RAD assumes the use of fourth generation techniques. In addition to creating software using conventional third generation programming languages, RAD processes more work to use existing program components or create more usable components.

e) Testing and Turnover
Because the RAD process emphasizes reuse, many program components have been tested.
3. Result and Discussion
This study produces a digital library that is integrated with academic users, which can be accessed through the https://lib.unnes.ac.id, as shown by Figure 2.

![Figure 2](image_url)

**Figure 2.** The main page of eprints

The user used by the student is an academic user (sikadu user), which has been entered into the LDAP server. This LDAP server can be accessed via the https://ldap.unnes.ac.id page. The appearance of the LDAP server is shown in Figure 3.

![Figure 3](image_url)

**Figure 3.** The appearance of the LDAP server

The login flowchart into the digital library page through LDAP can be shown in Figure 4.
After the sikadu user is inserted into the LDAP server, students can log into the eprints page to upload their final assignment/thesis/dissertation. The student admin page is shown in Figure 5.

**Figure 4.** Login authentication process

After the final results are submitted, the library admin will check whether it has fulfilled the format or not. When it has fulfilled the format, the final results can be published immediately.

**Figure 5.** Admin page
4. Conclusion
LDAP is a protocol that regulates the mechanism of accessing directory services (Directory Service) which can be used to describe much information such as information about people, organizations, roles, services and many other entities.

LDAP uses a client-server model, where the client sends a data identifier to the server using the TCP/IP protocol and the server tries to look for it on the DIT (Directory Information Tree) stored on the server. When found, the results will be sent to the client, but if not, the result will be a pointer to another server that stores the data that is being searched.

The results sent to the client will be used to access the application lib.unnes.ac.id, then the user can upload the thesis, thesis, and dissertation that will be validated by the library officer, to be able to improve service efficiency at the UNNES.

If the data uploaded by the client is declared valid by the librarian, then the client will get a library free letter as a graduation requirement.

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