



Innovating Educational Publication Processes: The Role of an Automatic LoA System in JTIP

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Abstract

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In this digital era, information technology has become an integral part of almost every aspect of life. In the educational context, this technology also plays an important role in facilitating the publication process of scientific articles that is more valid, practical and effective. This research aims to develop the Padang State University Journal of Information and Educational Technology (JTIP) system, especially the development of an automatic LoA (Letter of Acceptance) system. Previously, the publication management process at JTIP still used manual methods in issuing LoAs. Therefore, it is necessary to develop an automatic LoA issuance system. This research uses the Research and Development (R&D) method with a 4D model approach which includes the Define, Design, Develop and Disseminate stages. The data collection technique was carried out through a questionnaire distributed to 4 validators, 25 authors and 3 editors to test the validity, practicality and effectiveness of the system. Data analysis uses the Aiken's V validity formula to test validity, average percentage to test practicality and effectiveness. The research results show that the automatic LoA system succeeded in shortening the LoA issuance time from 5-7 days to 1 day and obtained an Aiken's V validity value of 0.87 (Valid), an average practical value of 93.5% (Very Practical), and effectiveness value with TCR of 88.8% (Very Good). It is hoped that this research can increase the practicality and effectiveness of the scientific journal publication process, especially in the context of education and technology in Indonesia. The duration of this research lasted for 6 months. Recommendations for future research are to explore the integration of this system with other publication platforms to increase the reach and accessibility of scientific publications.

Keywords:

Journal System, Automatic LoA, JTIP, R&D, 4D, Universitas Negeri Padang

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INTRODUCTION

In this digital era, information technology has become an integral part of almost every aspect of life. In the educational context, this technology also plays an important role in facilitating a more practical, effective and efficient scientific article publication process. In a scientific and academic context, the dissemination of scientific information becomes increasingly easier through the publication of web-based scientific journals (Munanto, T. C., et al. 2020). Universities and higher education institutions, including Universitas Negeri Padang, are increasingly aware of the importance of scientific publications and appreciate the important role of scientific journals in disseminating knowledge.



Jurnal Teknologi Informasi dan Pendidikan (JTIP) is one of the scientific journals under the auspices of Universitas Negeri Padang which will be developed in the dissemination of scientific knowledge in the fields of education and technology. As the number of published studies and articles grows, the need to efficiently manage, organize, and disseminate journal content becomes increasingly important (Afrianto, I., et al. 2018).

In recent years, web-based information systems have become a popular solution to overcome these challenges (Darul, M., et al. 2020). Web-based information systems have advantages in terms of accessibility, scale and flexibility (Martin, J., & Tanaamah, A. R.. 2020; Novaliendry. D., et al. 2023). This allows authors, editors and readers to easily access journal content from various locations, reducing geographic barriers in the dissemination of knowledge (Andini, R. 2020).

Despite its significant potential benefits, the development of the JTIP system faces technical and methodological challenges. Previously, the process of applying for a Letter of Acceptance (LoA) at JTIP was conducted manually, requiring 5 to 7 days for the issuance of the LoA. This manual process often led to delays and inefficiencies. With the implementation of the new automated system, it is anticipated that the issuance of the LoA can be reduced to just 1 day. This improvement not only streamlines the publication process but also enhances the overall efficiency of managing scientific articles within the journal.

Thus, this research will make a positive contribution in improving the quality and affordability of this scientific journal, as well as advancing the field of education and technology at Universitas Negeri Padang.

Information System

An information system is a series of interconnected elements to collect, process, store and disseminate information to support decision making in an organization (Altarawneh, H., & Tarawneh, M. M.. 2020). Information systems include hardware, software, data, procedures, and users (brainware) involved in the process (Hidayat, R., Muhammad, & Rifqo, H. 2022): (1) Hardware (Hardware): Is the physical part of the system, including computers, servers, network devices, and other hardware used for data processing and storage. (2) Software (Software): Is a program or application used to manage and control system operations. This includes operating systems, business applications, and other software. (3) Data: These are facts or information processed by the system. Data can be numbers, text, images, sounds, or other forms. (4) Procedure: These are the steps or rules used to run the system. This process includes how information is collected, processed and distributed. (5) Users (Brainware): Are users of information systems, such as managers, end users, and programmers. Humans are also involved in making decisions based on the information provided by the system.

An information system is a combination of technology, people, processes, databases, and hardware that work together to collect, process, store, and disseminate useful information within an organization (Rachmi Azanisa Putri., et al. 2023). An information system is a combination of computers, hardware, software, network infrastructure, and humans that work together to process, store, send, and receive information in an organization (Fibriasari, H., et al. 2020). Information systems are a combination of technology, processes, and people that

work together to collect, store, process, and disseminate information needed to support decision making in an organization (Setiawan, A., et al. 2022). Information systems are a combination of technology, data, processes, and people that work together to manage information and decision support in an organization (Nugroho, A. S. B., et al. 2018).

Journal Article Information System

The journal article information system is a platform or system specifically designed to manage, monitor and publish all aspects related to scientific article publication journals (Mauko, I., et al. 2017). This system helps with the editorial management process, article submission, article review, copyediting, and production related to scientific journals (Mukti, R. A. 2021) : (1) Editorial Management: The editorial management process in a journal article information system involves a series of activities designed to manage and facilitate the production and publication of scientific articles. (2) Article Submission: The article submission process in the journal article information system is the steps taken by the author to submit an article to a scientific journal. (3) Article Review: The article review process in the journal article information system involves peer review by experts or researchers with related expertise. (4) Copyediting: The copyediting stage in the journal article information system is an important step in the editorial process which aims to improve the quality, clarity and acceptability of the language and structure of the article before publication. (5) Production: The production stage of the journal article information system involves a series of activities that focus on managing and preparing articles for publication. (6) In general, a journal article information system is a system to provide easy and efficient access to journal article collections, facilitate search and research processes, and enable a wider and more open exchange of scientific information.

OJS (Open Journal System)

Open Journal Systems (OJS) is an open-source software platform specifically designed to facilitate the management and publication of scientific journals electronically (Mukti, R. A. 2021). OJS was developed by the Public Knowledge Project (PKP), an initiative that aims to increase access to scientific knowledge (Nurdiansyah, E., et al. 2021).

OJS is a popular solution among academic institutions and journal publishers to manage the scientific journal publishing process in an effective and structured manner knowledge (Nurdiansyah, E., et al. 2021).

LoA (Letter of Acceptance)

Letter of Acceptance (LoA) in the context of journal articles is an official letter issued by the editor or journal publisher to the author to notify that the submitted article has been accepted for publication. (Rachmi Azanisa Putri., et al. 2023).

This LoA usually serves as official confirmation or approval that the article has been accepted for publication (Afrianto, I., et al. 2018). A Letter of Acceptance for a journal article is an important document that marks the final stage of the peer review process and begins the process towards formal publication (Andini, R.

2020). This is also an important moment for the author to celebrate the author's success and prepare the article for public consumption (Murdiani, D., et al. 2020). This LoA has an important role in the process of publishing scientific journal articles. It provides clarity to authors that their article has been accepted for publication and provides instructions regarding the next steps that need to be taken before the article can be published. LoAs can also be used as official evidence for administrative or academic purposes, such as completing requirements for research funding or fulfilling assignment requirements. academic.

METHODS

This research creates innovation in the form of system development, therefore, this research adopts a Research and Development (R&D) approach (Novaliendry. D, & Zahra. F. 2022). The R&D method is used to develop products by combining theoretical analysis and testing the validity and effectiveness of the designs created. The goal is to create products that are useful and can be used effectively (Ariyanto, R., et al. 2022). With the R&D method, new products can be designed, or existing products can be improved to be more structured and fit for purpose on a particular topic (Ramadannisa, R. F., & Hartina, M. M. 2022).

Subjects of this research involved three groups: 4 validators for validity testing, 25 authors for practicality testing, and 3 editors for effectiveness testing. Data was collected through questionnaires designed for each group. The Grid instrument has been structured to ensure that all important aspects are covered, and the instrument has been validated by experts before use. Data analysis was carried out by calculating validity values using Aiken's V for validity tests, and calculating the average percentage of assessments for practicality tests and effectiveness tests. The results of each stage are expected to provide a comprehensive picture of the reliability and quality of the system being developed.

4D Model

The development model used in developing the JTIP UNP system is the 4D development model (Define, Design, Develop, and Disseminate) (Sirjon, Sukardjo, M., & Solihatin, E. 2023; Suriswo, Aulia, F., & Utami, W. B. 2023; Kandriasari, A., et al. 2023). The 4D model is very suitable for system development because it has a structured structure and can be applied to various types of projects, including system development (Yolanda, N., & Rizal, F. 2022; Sugiyono. 2017; Yulianeta, Y., Yaacob, A., & Lubis, A. H. 2022; Firdausi, A., & Wulandari, F. E. 2021).

Based on the problems underlying this research, the appropriate development model for this research is the 4D model (Muchlis, E. E., Priatna, N., & Dahlan, J. A. 2021; Sari, N. M., Syaiful, A., & Yandra, M. 2021; Hakim, D. R., & Pertiwi, K. R.2023; Izzah, D. W., Nuryantini, A. Y., & Pitriana, P. 2024; Sari, M. P., Muttaqin, A. ., Putri, R. E. ., & Oktavia, R. 2024). The needs analysis will look at the article publishing process from initial submission to publication. Based on this, a valid, practical and effective JTIP UNP system can be developed to become a forum for the publication of quality and structured scientific articles. Figure 1 illustrates the steps for 4D research and development.

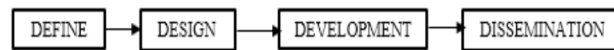


Figure 1. 4D Model

Development Procedure

The JTIP system development procedure uses a 4D model. This development procedure goes through several stages, namely define, design, development, and Disseminate. The complete research procedure design can be described as follows:

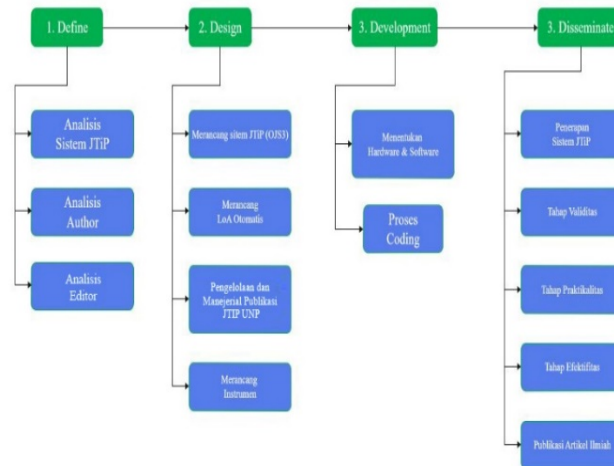


Figure 2. UNP JTIP System Research Procedures

Figure 2 depicts the research procedures that will be carried out through a series of stages, including definition, design, development and dissemination. The definition stage involves two types of analysis, namely JTIP system analysis and Author analysis. The design stage or design of the JTIP system is carried out in accordance with procedures, namely designing the JTIP system (OJS3), designing automatic LoA, designing automatic article affiliation and statistics, and designing instruments. The next stage is development, which begins with determining the hardware and software for system development needs, and the coding process. After the development process is complete, the final stage is Deployment, starting from validity testing by experts, if there are revisions they must be corrected first, until all trials have been carried out, then the stage of implementing the JTIP system that has been developed. The next stage is the publication of research articles.

RESULTS & DISCUSSION

Result

This implementation is based on the interface design described previously. The application design has been translated into program code to enable the presentation of a user-friendly interface for interacting with the system. A needs analysis was carried out to identify important aspects in developing the LoA (Letter of Acceptance) system for the Journal of Information and Educational Technology (JTIP) at Padang State University. The sample used in this research consisted of 4

validators for validity testing, 25 authors for practicality testing, and 3 editors for effectiveness testing.

The analysis results show that the LoA application process was previously carried out manually, taking between 5 and 7 days to be published. With the development of the new system, it is hoped that the LoA issuance time can be accelerated to just 1 day. The validity of the system developed was tested using a questionnaire assessed by 4 validators, with an Aiken's V result of 0.87, which indicates that the system is valid.

Practicality tests were carried out on 25 authors, which showed an average value of 93.5%, indicating that the system is very practical to use. In addition, effectiveness testing by 3 editors resulted in a TCR (Tingkat Capaian Responden) value of 88.8%, indicating that this system is very effective in supporting the journal publishing process. These results show that the development of the LoA system not only increases time efficiency, but also the quality of management publications in JTIP.

Below are the outputs resulting from the development of the Letter of Acceptance (LoA) System interface for the Jurnal Teknologi Informasi dan Pendidikan (JTIP) Universitas Negeri Padang.

LoA Plugin Static Page

Figure 3 is a display of the plugin page for creating a LoA (Letter of Acceptance) in the Jurnal Teknologi Informasi dan Pendidikan (JTIP) System at Universitas Negeri Padang. The developer adds a plugin for the LoA display automatically, creating this page is synchronized with Google Forms for the display creation process.

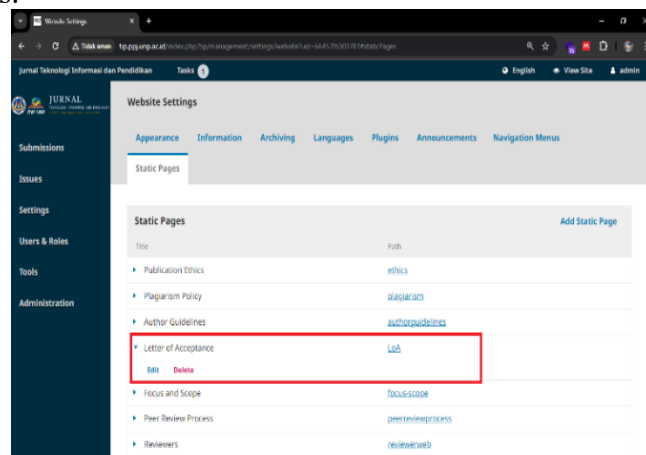


Figure 3. LoA Plugin Static Page

LoA Submission Page

Figure 4 shows the automatic LoA (Letter of Acceptance) submission page. The author can submit the LoA to the JTIP system if he has submitted an article to the JTIP system. The author will receive a verification code for submitting the LoA after submitting the article to the JTIP UNP system.

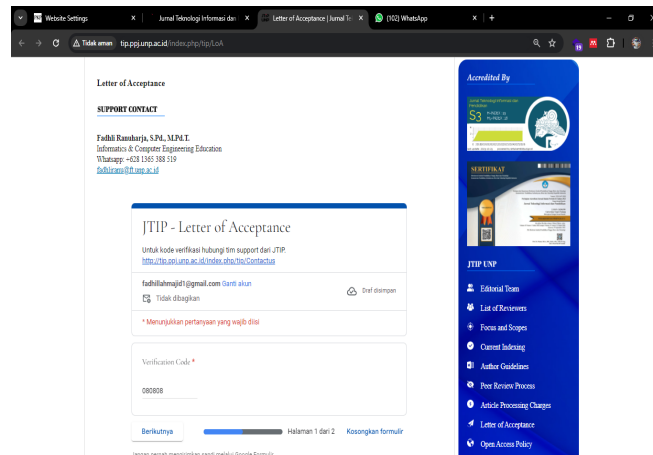


Figure 4. LoA Submission Page

LoA Form Filling Page

Figure 5 is a display page for filling out the LoA application form in the JTIP system. After the author has received the verification code for submitting the LoA application and has entered the verification code in the LoA application display, the author must then fill in the article data for the process of submitting the LoA application. The process of filling in article data starts from the article number, this article number can be seen from the author summary page. Then the author must fill in the name "Corresponding Author" or the author's first name on the submitted article. Next, fill in the title data for the submitted article. then fill in the corresponding author email data. Next, fill in the data for the names of all authors on the articles that have been submitted. Then the last thing is to fill in the affiliation data or university name of the first author, for example: "Universitas Negeri Padang".

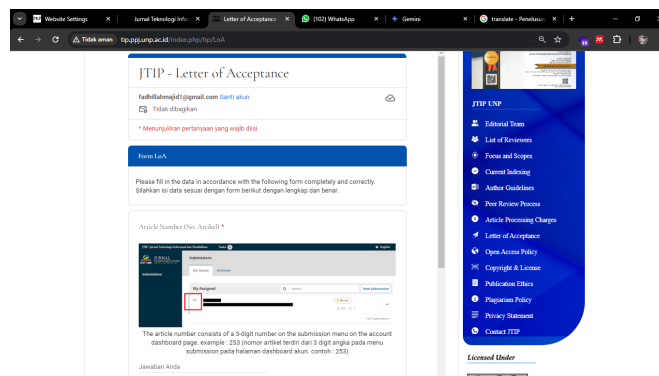


Figure 5. LoA Form Filling Page

Automatic LoA Template

This step involves the process of creating an automatic LoA template. The data in this automatic LoA template is created the same as the LoA filling form data. The LoA templet that has been created can be seen in Figure 6 below.



Figure 6. LoA Form Filling Page

Figure 6 is a display of the automatic LoA template that will be used for the automatic LoA creation process in the JTIP UNP system application.

Management of LoA Respondent Data

This step involves the data management process of respondents who have submitted LoA applications and who have filled in the LoA application data form automatically. This respondent data will be synchronized with the LoA template for the automatic LoA creation process. For more details on LoA respondent data, you can see Figure 7 below.

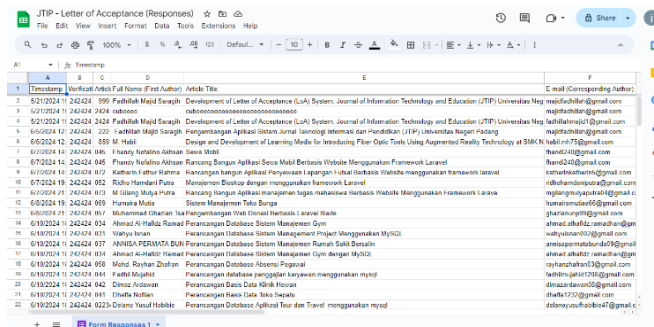


Figure 7. Management of LoA Respondent Data

Figure 7 is a display of LoA respondent data. This LoA respondent data will increase automatically if there are authors who have filled in the LoA form data in the JTIP UNP system application.

Extensions Autocrat

This step involves the generator configuration process for automatic LoA creation in the JTIP UNP system application. Configure this automatic LoA generator using Autocrat Extensions. The appearance of autocrat extensions can be seen in Figure 8 below.

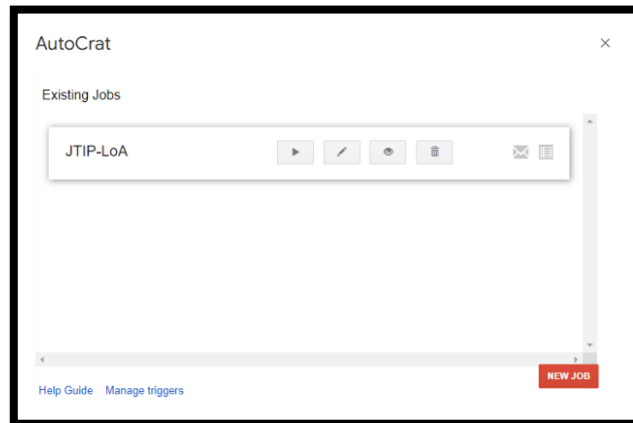


Figure 8. Extensions Autocrat

Figure 8 is a display of automatic LoA autocrat extensions in the JTIP UNP system application. After the author has filled in the LoA data form, the data will automatically be captured in the LoA respondent data. After the data has been captured automatically. So the editorial team of the JTIP UNP system application will validate it by generating the autocrat extensions by pressing the generate/play button, then the autocrat extensions will automatically run and automatically the LoA file that has been generated will be sent to the author's email which has been filled in in the LoA submission form data.

Discussion

Validity test

Software system validity data is collected through the use of questionnaires. In this context, researchers compiled a questionnaire which was given to four validators who were tasked with validating the software system that had been developed. Before a validation test is carried out by a software system expert, the questionnaire instrument used in the test is tested for validity by an expert who has an understanding of questionnaire instruments. The process of testing the validity of the questionnaire instrument is adjusted to the predetermined grid modifications.

The questionnaire that will be used in the validity test has received approval from the validator and is considered suitable for use in research. Validation is carried out by four (4) software system validators who provide assessments on aspects of content suitability, clarity of information, and quality aspects of the design that has been developed.

Based on the assessment of each indicator aspect given to the validator, the total value is added up and the percentage of assessment according to aspect is calculated. Software system validation is summarized based on validation categories, as can be seen in Table 1 below.

Table 1. Validator Assessment of Software Systems

No	Assessment Aspects	Validity Results	Category
1.	Aspects of Content Suitability	0,87	Valid
2.	Aspects of Information Clarity	0,86	Valid
3.	Design Quality Aspects	0,88	Valid
	Average	0,87	Valid

Table 1 is the results of the validity test assessment of the software system that has been developed. It can be seen that the results of the assessment from 4 validators of the software system with aspects of assessing content suitability, clarity of information, and design quality each received a validity value (Aiken's V) of 0,87, 0.86, and 0.88. The values that have been processed and obtained can be categorized as valid. According to the rules of the validity test using "Aiken's V", if the value is less than 0.61 then the category is invalid, and if the value is above 0.61 then the category is valid.

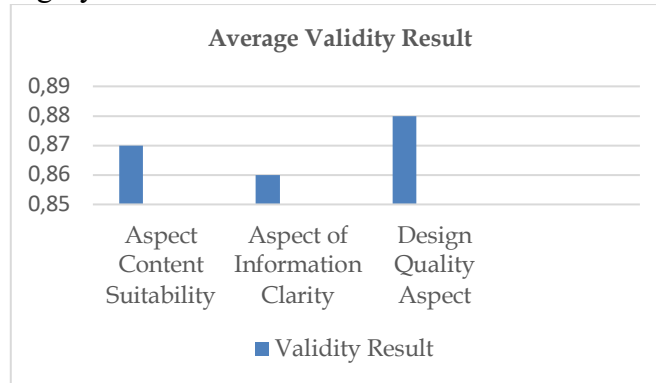


Figure 9. Average Validity Result

Figure 9 presents a bar diagram of the average validity results. The validity test for the JTIP-UNP Letter of Acceptance (LoA) system yielded an average value exceeding 0.86 across all assessment criteria, indicating a valid assessment by software system expert validators. The aspects contributing to this validity include content suitability, information clarity, and design quality. Specifically, content suitability ensures that the system meets the intended educational and publication requirements, while information clarity assesses the comprehensibility and accessibility of the system's features. Additionally, design quality evaluates the user interface and overall user experience.

Practicality Test

Data on the practicality of using system applications was collected through the use of questionnaires. In this context, researchers compiled a questionnaire which was given to 25 authors who were tasked with testing the practicality of the system application that had been developed. Before conducting a practicality test on the author, the questionnaire instrument used in the test is tested for validity by experts who have an understanding of questionnaire instruments. The practicality test process for the questionnaire instrument is adjusted to the predetermined grid modifications.

The questionnaire that will be used in the practicality test has received approval from the author or author, in this case a student from the Department of Electronics Engineering. The practicality test was carried out by 25 authors who provided assessments on the convenience aspect, usefulness aspect and attractiveness aspect that had been developed.

Based on the assessment of each indicator aspect given to the author, the total score is added up and the percentage of assessment according to aspect is calculated.

The practicality of using system applications is summarized based on practicality categories, as can be seen in Table 2 below.

Table 2. Recapitulation of the Practicalities of Using System Applications

No	Assessment Aspects	Assessment Percentage	Category
1	Convenience Aspect	93,9%	Very Practical
2	Benefit Aspect	94,2%	Very Practical
3	Aspects of Attraction	92,5%	Very Practical
	Average	93,5%	Very Practical

Table 2 is the result of testing the practicality of using the system application that has been developed. These results can be seen that there are three aspects of the practicality of using system applications based on testing system applications through questionnaires. This average percentage includes responses from the author or authors in several aspects, namely the aspect of ease of use of the system application which was obtained at 93.9% in the very practical category, the aspect of the usefulness of using the system application which reached 94.2% in the very practical category, and the aspect of attractiveness. obtained 92.5% in the very practical category. Aspects of convenience, benefits and attractiveness contribute to each other in increasing the practicality of the JTIP UNP application. The convenience aspect includes an insightful user interface and simple navigation, so that users can carry out the article submission process without difficulty. Benefit aspect Refers to the benefits obtained by users, such as saving time and increasing efficiency in the publication process, which makes authors more active in publications. Meanwhile, the attractiveness aspect involves attractive visual elements, such as interface design and aesthetic delivery of information, which create a positive impression and make beta users use the system. These results show that the development of the JTIP UNP system application is considered practical by the author and can help the process of publishing scientific articles.

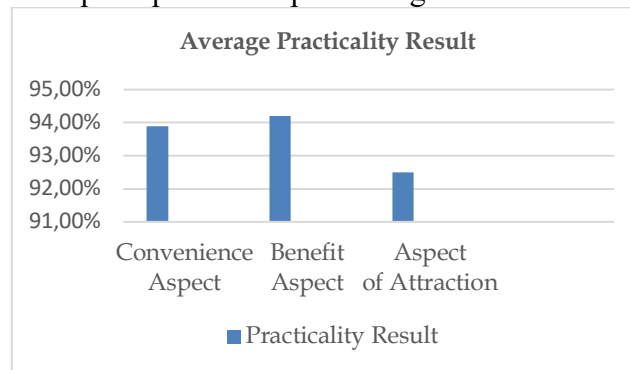


Figure 10. Average Practicality Result

Figure 10 is a bar diagram of the average practicality results. The diagram obtained an average percentage score above 92.5% (Very Practical) for all assessment percentages, indicating that the system use test in JTIP UNP is considered practical by the author, and can help improve the quality of scientific article publications. Users feel that this system is easy to use, has many benefits, is effective in improving the quality of scientific article publications, and meets their needs. The practicality test results also show that the JTIP-UNP Letter of

Acceptance (LoA) system can be well received by users and has a high practical value, thus confirming that this platform can be used effectively to improve the quality of publication of scientific articles in the educational environment.

Effectiveness Test

Effectiveness test data is carried out by testing the effectiveness of managerial management of publications in accordance with the elements of scientific journalistic assessment. Effectiveness test data is collected through the use of questionnaires. In this context, the researcher compiled a questionnaire which was given to three editorial staff tasked with testing the effectiveness of the publication management system that had been developed. Before the system application performance test is carried out, the questionnaire instruments used in the test are tested for effectiveness by experts who have an understanding of questionnaire instruments. The process of testing the effectiveness of the managerial management system for publishing questionnaire instruments is adjusted to the modification of the grid that has been determined.

The questionnaire that will be used in testing the effectiveness of publication management has received editorial approval, in this case the editor who manages JTIP UNP. The effectiveness test was carried out by 3 editorial staff who provided assessments on 8 aspects that are in accordance with the elements of scientific journal accreditation assessment include: first, the aspect of naming scientific journals, which includes clarity and suitability of the name of the journal to the field of study being covered. Second, the institutional aspect of the publisher, which includes the credibility and support of the institution that publishes the journal. Third, the editing and publication management aspect, which involves a transparent and effective editorial process in managing articles. Fourth, the substance aspect of the article, which assesses the quality and originality of published research. Fifth, the aspect of writing style, which includes compliance with established language rules and writing formats. Sixth, the appearance aspect, which includes attractive and professional visual design and journal layout. Seventh, the periodicity aspect, which assesses consistency in publishing and the frequency of journal publications. Finally, the dissemination aspect, which includes strategies for disseminating the article to a wider audience, ensures the accessibility and visibility of the research. All of these aspects contribute to the credibility and quality of the scientific journals produced.

Based on the assessment of each indicator aspect provided to the editorial team, the total scores are added up and the percentage of assessments according to aspect is calculated. The system application effectiveness test is summarized based on the TCR (Tingkat Capaian Responden) category, as can be seen in Table 3 below.

Table 3. Results of Publication Managerial Management Effectiveness Test

No	Assessment Aspects	TCR	Category
1	Aspects of Naming Scientific Periodicals	84,4%	Very good
2	Publisher Institutional Aspects	91,7%	Very good
3	Aspects of Editing and Management of Publication Management	91,7%	Very good
4	Aspects of Article Substance	93,3%	Very good

5	Aspects of Writing Style	88,9%	Very good
6	Appearance Aspect	86,7%	Very good
7	Aspect of Timelessness	84,4%	Very good
8	Dissemination Aspect	88,9%	Very good
Average TCR		88,8%	Very good

Table 3 is the result of testing the effectiveness of managerial management of JTIP UNP publications that have been developed. These results can be seen that there are 8 aspects of the effectiveness of publication managerial management based on system application testing through questionnaires. The results of the TCR value (Respondent Achievement Rate) include responses from editorials in several aspects, namely the aspect of naming scientific periodicals which obtained a TCR value of 84.4% in the very good category, the institutional aspect of the publisher obtained a TCR value of 91.7% in the very good category. , aspects of editing and management of publications with a TCR score of 91.7% in the very good category, aspects of article substance getting a TCR score of 93.3% in the very good category, aspects of writing style getting a TCR score of 88.9% in the very good category, aspects The appearance obtained a TCR value of 86.7% in the very good category, the sustainability aspect obtained a TCR value of 84.4% in the very good category, and the dissemination aspect received a TCR percentage of 88.9% in the very good category. The overall results of the TCR value based on the assessment aspects were then calculated by the average TCR value from all assessment aspects, obtaining a TCR value of 88.7% in the very good category. These results indicate that the development of the JTIP UNP system application is considered very good by the editorial team and can help the process of publishing scientific articles.

CONCLUSION

This research successfully developed the Letter of Acceptance (LoA) System for the Jurnal Teknologi Informasi dan Pendidikan (JTIP) at Universitas Negeri Padang using the 4D model of research and development (R&D), which includes the Define, Design, Development, and Disseminate stages. Compared to previous studies, which primarily focused on manual processes in journal management, this research introduces a significant innovation by automating the LoA issuance process, thereby reducing the publication time from 5-7 days to just 1 day. The validity test yielded an average Aiken's V value of 0.87 (Valid), and the practicality and effectiveness tests showed average values of 93.5% (Very Practical) and 88.8% (Very Good), respectively. These results indicate that the JTIP System effectively facilitates the management of scientific journals, including article management, peer-review assessment, and the publishing process. Looking ahead, it is recommended that future research explore additional features that enhance user interactivity and expand the system's capabilities, such as mobile access and real-time tracking of submission statuses. This study contributes significantly to the development of information systems in higher education in Indonesia, paving the way for further enhancements in the quality of scientific journal management across various educational institutions.

REFERENCES

- Afrianto, I., Atin, S., Heryandi, A., & Warlina, L. (2018). The Online Journal Aggregator System Design Using User Centered Design (UCD) Approach. *Lontar Komputer : Jurnal Ilmiah Teknologi Informasi*, 158. <https://doi.org/10.24843/lkjiti.2018.v09.i03.p05>.
- Altarawneh, H., & Tarawneh, M. M. (2023). The Impact of Information System Design Quality on E-Learning Systems Performance. *International Journal of Interactive Mobile Technologies*, 17(3), 4–20. <https://doi.org/10.3991/ijim.v17i03.36269>.
- Andini, R. (2020). Pemanfaatan Akses Jurnal Elektronik (E-Jurnal) Dengan Media Smartphone (Studi Kasus Mahasiswa Program Studi Ilmu Perpustakaan Angkatan 2016-2017 Fakultas Adab Dan Humaniora Uin Raden Fatah Palembang). *TADWIN: Jurnal Ilmu Perpustakaan Dan Informasi*, 1(2), 87-95. <https://doi.org/https://doi.org/10.19109/tadwin.v1i2.6487>.
- Ariyanto, R., Haryadi, B., Harlanu, M., Kiai Wahid Hasyim NoKm, J. H., & Bancak, K. (2022). Development of Competency Test for Cluster Scheme of Information System-Based Network Cable Installation. *Journal of Vocational Career Education*, 7(1), 39–46. <https://journal.unnes.ac.id/nju/index.php/jvce>.
- Darul, M., Santoso, H., Jamaludin, I., Dewi, E., & Mulyani, S. (2020). Sistem Informasi Geografis Penyebaran Usaha Mikro Kecil Menengah (Umkm) Di Kabupaten Majalengka. *Jurnal Teknologi Informasi Dan Ilmu Komputer (JTIK)*, Vol. 7(No. 5), 1029–1034. <https://doi.org/10.25126/jtiik.202072489>.
- Fibriasari, H., Trisna Astono Putri, T., Elektro, T., Bahasa Prancis, P., & Informatika, T. (2020). INFOKUM is licensed under a Creative Commons Attribution NonCommercial 4.0 International License (CC BY-NC 4.0) 77 Prototype Development of Research and Community Service Web Based Information System (SIM-PPM) of LPPM Unimed. *JURNAL INFOKUM*, Volume 9(No.1), 77–81. <http://infor.seaninstitute.org/index.php/infokum/index>.
- Firdausi, A., & Wulandari, F. E. (2021). Development of Web-Based Science Learning Module in Improving the Students' Understanding of Eco-Literacy. *Jurnal Penelitian Dan Pengkajian Ilmu Pendidikan: E-Saintika*, 5(3), 241–252. <https://doi.org/10.36312/esaintika.v5i3.426>.
- Hakim, D. R., & Pertiwi, K. R. (2023). Development of Innovative Student Worksheet Using Google Sites for Reproductive System Material. *Jurnal Penelitian Pendidikan IPA*, 9(9), 7484–7490. <https://doi.org/10.29303/jppipa.v9i9.4429>.
- Hidayat, R., Muhammad, & Rifqo, H. (2022). Visualisasi 3D Sebagai Media Promosi Berbasis Web (Studi Kasus: Fakultas Teknik Universitas Muhammadiyah Bengkulu. *JURNAL KOMITEK*, 2(2). <https://doi.org/10.53697/jkomitek.v2i2>.
- Hidayat, R., Muhammad, & Rifqo, H. (2022). Visualisasi 3D Sebagai Media Promosi Berbasis Web (Studi Kasus: Fakultas Teknik Universitas Muhammadiyah Bengkulu. *JURNAL KOMITEK*, 2(2). <https://doi.org/10.53697/jkomitek.v2i2>.
- Izzah, D. W., Nuryantini, A. Y., & Pitriana, P. (2024). Development of Web-based Online Learning Media Using Google Sites to Increase Student Motivation and Learning Outcomes on Elasticity Material. *KnE Social Sciences*, 9(8), 1-10.
- Kandriasari, A., et al. (2023). Development Of Practicum Learning Models Assisted with Practice Guide Videos. *JTP - Jurnal Teknologi Pendidikan*, 25(2), 246–256. <https://doi.org/10.21009/jtp.v25i2.34678>.
- Martin, J., & Tanaamah, A. R. (2018). Perancangan Dan Implementasi Sistem Informasi Penjualan Berbasis Desktop Website Menggunakan Framework Bootstrap Dengan Metode Rapid Application Development, Studi Kasus Toko Peralatan Bayi 'Eeng

- Baby Shop.' Jurnal Teknologi Informasi Dan Ilmu Komputer, 5(1), 57–68. <https://doi.org/10.25126/jtiik.201851547>.
- Mauko, I., Setiohardjo, N., & Noach, F. (2017). Pengembangan Website Unit Penelitian Dan Pengabdian Kepada Masyarakat Dan Penerapan Jurnal Elektronik Berbasis Open Source Di Politeknik Negeri Kupang. *Jurnal Ilmiah Flash*, 3(2), 100-108. doi:10.32511/flash.v3i2.145.
- Muchlis, E. E., Priatna, N., & Dahlan, J. A. (2021). Development of a web-based worksheet with a project-based learning model assisted by GeoGebra. *Jurnal Riset Pendidikan Matematika*, 8(1), 46-60. <https://doi.org/10.21831/jrpm.v8i1.40985>.
- Mukti, R. A. (2021). Sistem Informasi Jurnal Elektronik Berbasis Web Pada Universitas Diponegoro. *Jurnal TEKNOINFO*, 15(1), 34-44, <https://doi.org/10.33365/jti.v15i1.473>.
- Murdiani, D., Yudhana, A., Sunardi, S. (2020). Implementasi Agile Method dalam Pengembangan Jurnal Elektronik di Lembaga Penelitian Non Pemerintahan (NGO). *Jurnal Teknologi Informasi Dan Ilmu Komputer*, 7(4), 709-718. <https://doi.org/10.25126/jtiik.2020741839>.
- Nugroho, A. S. B., Almira, T., Qudratullah, A., & Saufi, A. (2018). Sistem Monitoring Kehadiran Siswa Menggunakan NodeMCU Pada Sepatu Yang Terhubung Pada Server Pemantauan Kehadiran Siswa. *Jurnal ELTIKOM*, 2(2), 87–93. <https://doi.org/10.31961/eltikom.v2i2.48>.
- Nurdiansyah, E., Dhita, A. N., Pratita, D. (2019). Analisis pemanfaatan jurnal elektronik oleh mahasiswa menggunakan Technology Acceptance Model (TAM). *Harmoni Sosial: Jurnal Pendidikan IPS*, 6(2), 175-185. <https://doi.org/10.21831/hsjpi.v6i2.27515>.
- Novaliendry. D, & Zahra. F. (2022). Sistem Pendukung Keputusan Aplikasi I-Dapodik Berbasis AHP dengan Metode Waterfall Pada Dinas Pendidikan dan Kebudayaan. *Jurnal Pendidikan Tambusai*, 6(2), 8359-8368.
- Nurdiansyah, E., Dhita, A. N., Pratita, D. (2019). Analisis pemanfaatan jurnal elektronik oleh mahasiswa menggunakan Technology Acceptance Model (TAM). *Harmoni Sosial: Jurnal Pendidikan IPS*, 6(2), 175-185. <https://doi.org/10.21831/hsjpi.v6i2.27515>.
- Rachmi, A. P., Panca H. P., & Ryan, R. S. (2023). The Integrated Information System Implementation Strategy in Korlantas Polri Based on the Zachman Framework Approach. *Jurnal RESTI (Rekayasa Sistem Dan Teknologi Informasi)*, 7(2), 381–388. <https://doi.org/10.29207/resti.v7i2.4842>.
- Ramadannisa, R. F., & Hartina, M. M. (2021). The Design of Web-Based Learning Using Google Sites for Teaching Heat and Temperature Topic. *Jurnal Penelitian & Pengembangan Pendidikan Fisika*, 7(2), 107 - 114. <https://doi.org/10.21009/1.07202>.
- Sari, M. P., Muttaqin, A. ., Putri, R. E. ., & Oktavia, R. (2024). Integrating Ethnoscience on Critical-Thinking Oriented Web-Based E-Module of Secondary School Science . *Jurnal Penelitian Pendidikan IPA*, 10(1), 371–384. <https://doi.org/10.29303/jppipa.v10i1.5928>.
- Sari, N. M., Syaiful, A., & Yandra, M. (2021). Web-Based Instructional Media Development Using Powtoon for Quantity Surveying Subject. *EAI*. 10.4108/eai.4-11-2020.2304588.
- Sirjon, Sukardjo, M., & Solihatin, E. (2023). Development of a Game-Based Science Learning Model Oriented to Papuan Local Culture for Grade IV Elementary School Students. *JTP - Jurnal Teknologi Pendidikan*, 25(3), 371–385. <https://doi.org/10.21009/jtp.v25i3.37370>.
- Sugiyono. (2017) *Combination research methods*. Bandung: Alfabata.

- Suriswo, Aulia, F., & Utami, W. B. (2023). Development of the Life Skills Learning Model for Elementary School students as Strengthening the Pancasila Student Profile. *JTP - Jurnal Teknologi Pendidikan*, 25(2), 315–322. <https://doi.org/10.21009/jtp.v25i2.37532>.
- Yulianeta, Y., Yaacob, A., & Lubis, A. H. (2022). The Development of Web-Based Teaching Materials Integrated with Indonesian Folklore for Indonesian Language for Foreign Speakers Students. *International Journal of Language Education*, 6(1), 46-62.
- Yolanda, N., & Rizal, F. (2021). Website Based E-Module Development on Computer System Vocational High School. *Jurnal Teknologi Informasi Dan Pendidikan*, 14(1), 40-46. <https://doi.org/10.24036/tip.v14i1.417>.