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ELECTRONIC ARCHIVE LEARNING MEDIA BASED ON PHPRAD ON DIGITAL ARCHIVING MATERIAL

Alya Sheva Trina
Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia
Email: alyashv7@gmail.com

Roni Faslah
Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia
Email: ronifaslah@unj.ac.id

Maulana Amirul Adha
Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia
Email: maulanaamirul@unj.ac.id

ABSTRACT

This research aims to develop and test the feasibility of a PHPRAD-based Electronic Archive learning media to improve digital archiving skills at SMK Negeri 44 Jakarta. This study employs a Research and Development (R&D) method with the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). Data for this research were collected through validation by two material experts and two media experts, as well as response questionnaires from 32 students following a field trial. The data analysis technique used in this study combines descriptive quantitative and qualitative analysis. The results showed that the feasibility test yielded a score of 96.67% from material experts, 76.66% from media experts, and 87.84% from student responses, resulting in an overall average feasibility score of 87.06%, which is categorized as "Very Suitable." Based on these results, the Electronic Archive learning media is deemed highly feasible and suitable as an alternative learning tool for the Digital Archiving material at SMK Negeri 44 Jakarta. This learning media effectively bridges the gap in digital archiving education by providing an innovative teaching tool. Furthermore, it also supports the mastery of practical skills relevant to the demands of the workforce, making it a highly recommended solution for optimizing the learning process at SMK Negeri 44 Jakarta.
Keywords: Learning media, Electronic archives, PHPRAD, Digital archiving

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan dan menguji kelayakan media pembelajaran Arsip Elektronik berbasis PHPRAD untuk meningkatkan keterampilan kearsipan digital di SMK Negeri 44 Jakarta. Penelitian ini menggunakan jenis *Research and Development* (R&D) dengan model pengembangan ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Data dalam penelitian ini dikumpulkan melalui validasi oleh dua ahli materi dan dua ahli media, serta angket respon dari 32 siswa setelah uji coba lapangan.Teknik analisis data dalam penelitian ini menggunakan teknik analisis deskriptif kuantitatif dan teknik analisis kualitatif. Hasil penelitian menunjukkan uji kelayakan dari penilaian ahli materi mendapatkan 96,67%, ahli media mendapatkan 76,66%, dan respon siswa 87,84% sehingga rata-rata dari keseluruhan uji kelayakan yaitu sebesar 87,06% dengan kategori "Sangat Layak". Berdasarkan hasil analisis data tersebut, media pembelajaran Arsip Elektronik dinilai sangat layak dan cocok untuk dijadikan alternatif media pembelajaran pada materi Kearsipan Digital di SMK Negeri 44 Jakarta. Media pembelajaran ini secara efektif menjembatani kesenjangan dalam pendidikan kearsipan digital dengan menyediakan alat ajar yang inovatif. Selain itu, media ini juga mendukung penguasaan keterampilan praktis yang relevan dengan kebutuhan dunia kerja,

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menjadikannya solusi yang sangat direkomendasikan untuk mengoptimalkan pembelajaran di SMK Negeri 44 Jakarta.

Kata kunci: Media pembelajaran, Arsip elektronik, PHPRAD, Kearsipan digital

INTRODUCTION

The era of digitalization has brought about very significant changes in the world of education, including the use of technology-based learning media (Permana et al., 2024). Digital-based learning media not only expands students' learning experiences but also provides significant convenience for educators or teachers in delivering complex and technical learning materials, such as the use of archival information systems. In facing the digital era and the continuously evolving challenges of the professional world, Vocational High Schools have a responsibility to produce graduates with skills that align with the needs of industry and government. One of the Indonesian government's key innovations in archival digitalization is the development of SRIKANDI (Integrated Dynamic Archival Information System). SRIKANDI has become the official national platform for managing dynamic archives digitally, integrated across agencies. The SRIKANDI system has been widely implemented in government agencies, making competence in using this important office tool essential for workers in the administrative and archival fields.

However, the reality in many Vocational High Schools, especially in Office Management or similar programs, shows that the curriculum and learning media used still largely focus on conventional archive management (Febriani et al., 2024). This creates a competency gap between SMK graduates and the real needs of the workforce, particularly in the context of using applications like SRIKANDI. Therefore, the development of electronic archive learning media in Vocational High School environments has become a very urgent need. SMK Negeri 44 Jakarta is a vocational school located in Central Jakarta, specifically in Cempaka Baru, Kemayoran. For the 2024/2025 academic year, this school uses the Merdeka Curriculum in its learning implementation. Based on the researcher's observations at SMK Negeri 44 Jakarta, there is still no practical learning media that utilizes technology to support classroom learning materials. For example, in the Archival Management Element of Phase F Office Management, teachers only use PowerPoint or play learning videos from YouTube, and the delivery method itself is dominated by lectures. Furthermore, there is no learning media available that can support practical activities and is relevant to the Field Work Practice for future job prospects in offices.

In the context of education, the use of information technology-based Electronic Archiving systems allows students to improve practical skills that are in line with industry demands. For example, research by Mufarridah and Susantiningrum (2024) shows that the implementation of Microsoft Access-based Electronic Archiving learning media at SMKN 6 Surakarta has significantly improved student learning outcomes, with the average class score increasing from 75,94 to 87,44 after two implementation cycles. Additionally, Santoso, Muhidin, Winata, and Aswari (2023) in their journal emphasize the importance of developing archival learning support software that is relevant to the needs of the professional world and employment.

In this regard, the researcher believes that PHPRAD is suitable to be used as effective and relevant learning media because PHPRAD itself can be integrated with various types of databases, allowing for the storage of digital archives in a structured format. This facilitates searching, organizing, and managing archival data more efficiently. Based on the analysis of the problems above and supported by several previous studies, the researcher is prompted to conduct a development research titled: "Development of PHPRAD-Based Electronic Archiving Learning Media for Digital Archiving Material at SMK Negeri 44 Jakarta." Therefore, this research aims to design and develop a PHPRAD-based archival learning

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website as a learning medium at SMK. Therfore, the urgency of developing electronic archive learning media in vocational schools is not merely a curriculum requirement, but also a strategic effort to equip students with 21st century skills that are in accordance with the dynamics of the modern bureaucratic system and actual job market needs.

The main objective of this research is to analyze the development process and measure the feasibility of the media to ensure its effectiveness. Theoretically, this research is expected to present a contextual learning technology innovation, where the use of PHPRAD enables the development of media that is interactive, responsive, and relevant to modern industry demands, thereby bridging the gap between theory and digital practice. Practically, the results of this research are beneficial for students as a means of direct practice to improve understanding and work readiness; for teachers as an effective alternative for practical learning media; for SMK Negeri 44 Jakarta as an impetus to facilitate innovative learning media and integrate technology into teaching; and for the researcher to strengthen insights into media development.

LITERATURE REVIEW

Instructional Media

The National Education Association (NEA) states that media encompasses any object that can be manipulated, observed, heard, read, or spoken, along with the instruments used for specific activities. In the context of learning, media serves as a crucial means to convey messages in the teaching and learning process. Without media, communication in education would be hindered, preventing the learning process from being maximized (Wulandari et al., 2023). A teacher's accuracy and skill in choosing appropriate learning media will also influence the learning process and the outcomes achieved (Wasiyah et al., 2023). Using suitable media can increase the dynamism of interaction between teachers and students, thereby enhancing the effectiveness and efficiency of the learning process (Auliya et al., 2023). Furthermore, the use of technology in education allows students to learn independently and boosts their engagement in the learning process (Muttalib et al., 2024).

Archive

In short, archives are a collection of documents, manuscripts, or other media that function as the main source of information in an organization. This definition is in line with Law Number 43 Article 2 of 2009 concerning Archives which states that archives are records of activities or events in various forms and media, following the development of information and communication technology. Mufidah (2013) in her journal states that archives are created, managed, and received by the organization to then be stored as evidence of activities.

Electronic Archive

Electronic archives are defined as archives stored in electronic media, created, communicated, stored, or accessed using electronic devices (Martini, 2021). Meanwhile, Mufidah (2013) explains that electronic archiving is a form of development of conventional archiving that utilizes software-based storage systems such as computers. Sutanto and Nuryani (in Wijaya et al., 2024) explain that electronic archive documents are files that have been converted and stored in digital archive form. In line with that, the International Council of Archives (ICA) defines electronic archives as documents that can be easily changed, moved, or processed using software.

PHPRAD

Ramadan & Yulianingsih (2024) explained that PHPRAD Classic is a web development tool that allows the creation of web applications quickly and efficiently using PHP and web technologies such as HTML, CSS, JavaScript for the frontend, PHP for the

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backend, and MySQL as a database. PHP in the RAD framework allows rapid website development, by utilizing prototyping that allows developers to directly test website functionality with end users.

ADDIE Model Development

Research and Development (R&D) methods are research methods used to produce a product and then test whether the product is suitable for use or not" (Syavira, 2021). R&D research method can be used as an approach that aims to produce a specific product and test its feasibility. This model has a structured program arrangement with a sequence of sequential activities, aimed at overcoming learning problems by providing learning media that are appropriate to the needs and characteristics of students. ADDIE consists of five main steps: (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation, as shown in Figure 1.

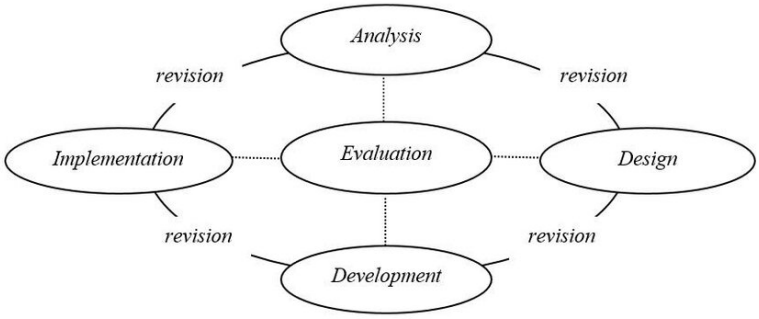

Figure 1. ADDIE Model Stage Flow
Source: Branch (2009)

Previous Research

Relevant previous research confirms the importance of developing web-based digital archiving systems to overcome the weaknesses of manual systems. For example, research by Muhammad Abdul Mughni Aziz et al. (2024) used the Research and Development (R&D) method to build SIPARDI, a digital archive storage information system at SMA Jendral Sudirman Kalipare. The results showed that the web-based system proved to be effective and feasible for supporting the transition from manual to digital archive management in a school environment. In line with this, research by Syamia et al. (2024) also applied the R&D method to design an archival information system for Commission C of the North Sumatra Provincial DPRD, focusing on overcoming obstacles such as human error, lengthy search times, and the risk of archive damage. By using UML design, the research aimed to improve the efficiency and security of documents in a government setting. Both of these studies, despite being in different contexts, underscore that the development of web-based archiving systems is a valid and effective solution for optimizing document management in both educational and governmental institutions.

METHOD

For the research conducted, this uses the Research and Development method and the development model is ADDIE which stands for Analysis, Design, Development, Implementation, Evaluation. This research used a Research and Development (R&D) approach with the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). The first stage is analysis, this stage aims to identify learning problems and determine the right solution while still referring to student needs for learning media. The second stage is design, focused on designing the media development flow, while preparing various

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elements and supporting documents for the next stage. Flowchart about navigation design can be seen in Figure 2.

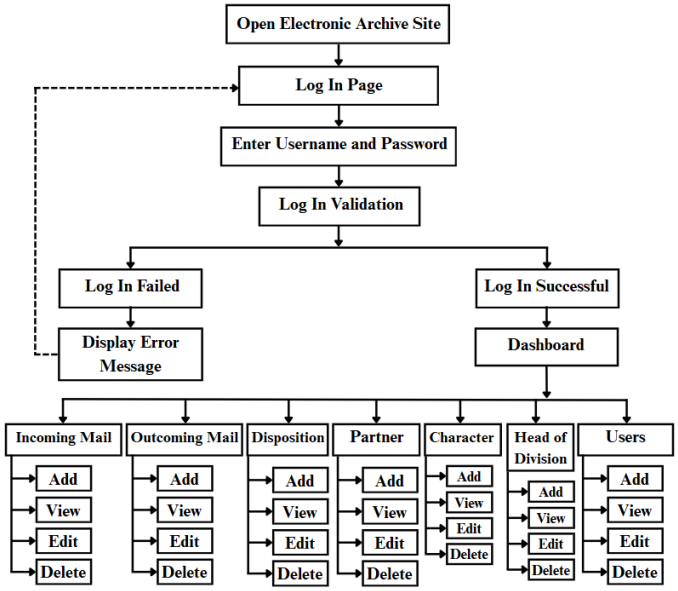

Figure 2. Flowchart of Navigation Design for Electronic Archive Creation
Source: Data Processed by Researcher (2025)

The third stage is development, which includes the process of creating PHPRAD-based learning media, including an assessment of feasibility based on the quality of material delivery and media effectiveness. The following is a navigation design flowchart for creating an Electronic Archive based on PHPRAD. The fourth stage, namely implementation, is carried out by testing learning media in a real environment, either through limited trials or field tests in the classroom. Finally, the evaluation stage aims to perfect the learning media to be more optimal and in accordance with the needs of students as the main users.

This research methodology involves the collection of quantitative and qualitative data sourced from experts and students. Product validation was conducted by two material experts (teachers from SMK Negeri 44 Jakarta) and two media experts (educational technology lecturers) using expert validation sheets. Subsequently, product testing was carried out in two stages: a limited trial involving 15 Phase E students and a field trial involving 32 Phase F students from the Office Management program. Quantitative data in the form of feasibility scores were collected through closed-ended questionnaires, while qualitative data consisting of feedback and suggestions for improvement were obtained from open-ended questionnaires administered to all subjects. This combination of data was used to measure the feasibility of the learning media and served as the basis for the final product refinement.

Table 1. Scoring Rubric for Validation Sheets and Student Responses

Score Range	Category
4	Very good
3	Good
2	Not Good
1	Very Not Good

Source: Data Processed by Researcher (2025)

The researcher chose to use a Likert scale with four levels of assessment to encourage respondents to provide more assertive and focused answers, without the option of "neutral" (Table 1). This approach is expected to produce clearer and more accurate data. Furthermore,

the data obtained through the validation sheet and response questionnaire will be processed in the form of a percentage to describe the level of feasibility of the Electronic Archive learning media developed with the help of PHPRAD.

Table 2. Eligibility Percentage Category

Score Range	Percentages	Category
5	81% - 100%	Very Suitable
4	61% - 80%	Suitable
3	41% - 60%	Moderately Suitable
2	21% - 40%	Unsuitable
1	0% - 20%	Very Unsuitable

Source: Data Processed by Researcher (2025)

RESULTS AND DISCUSSION

Research and Development Results

This research and development created a product, namely PHPRAD-based Electronic Archives learning media on Digital Archives Material at SMK Negeri 44 Jakarta which can be accessed from the site https://arsipsmkn44jkt.kepri.pro. The archiving system functions as a learning medium for practical work in digital archive management of incoming and outgoing letters. PHPRAD-based Electronic Archive learning media makes students enthusiastic to learn to improve their practical archiving skills, because this system makes it easy to carry out learning activities. This PHPRAD-based Electronic Archive learning media is also designed simply so that students do not experience obstacles in operating it. And equipped with various features such as inputting incoming letters, outgoing letters, and dispositions plus navigation buttons that can make it easier for students to view, edit, or delete letter data.

The display of the log in menu on the PHPRAD-based Electronic Archive learning media can be seen in Figure 3, and Dashboard Display can be seen in Figure 4.

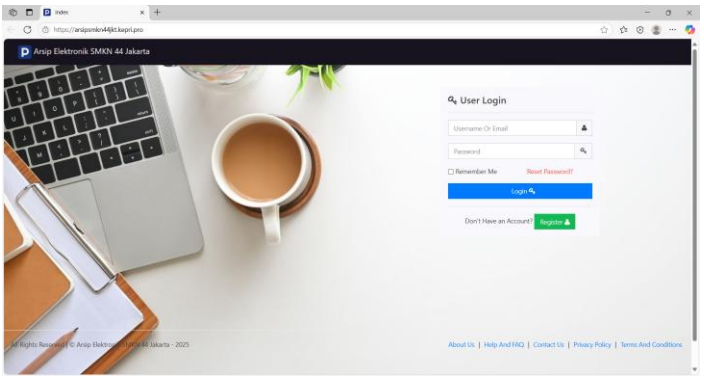

Figure 3. PHPRAD-Based Electronic Archive Learning Media Log In Display

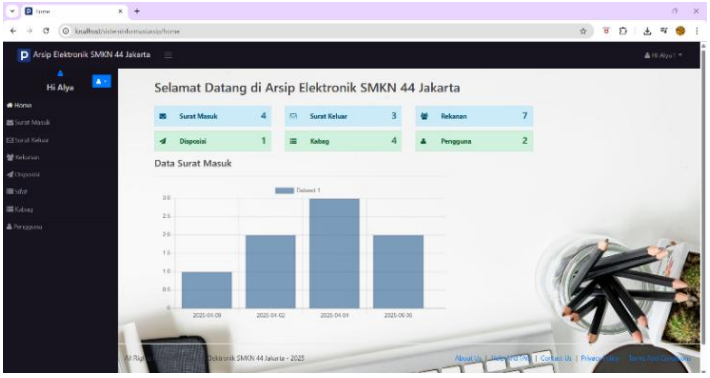

Figure 4. PHPRAD-Based Electronic Archive Learning Media Dashboard Display

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Based on Figure 5, 6, 7, and 8, the form menus found in the PHPRAD-based Electronic Archive learning media include incoming mail, outgoing mail, disposition, partners, characteristic, head of section and user menus. In addition, in the incoming and outgoing mail menu there are several navigations that can be used such as adding letters, searching for letters with, viewing letter details, editing letter details and deleting letters. The add letter button will automatically direct the display to the letter input formular such as the date of receipt or sending the letter, letter number, to/from, and there is a formular for adding digital letter files.

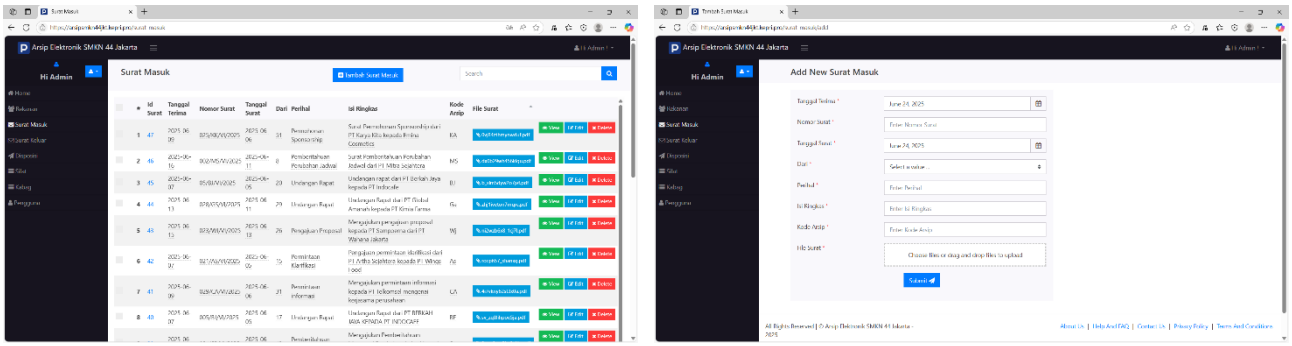

Figure 5. Menu Display and Details for Filling in the Incoming Mail Form

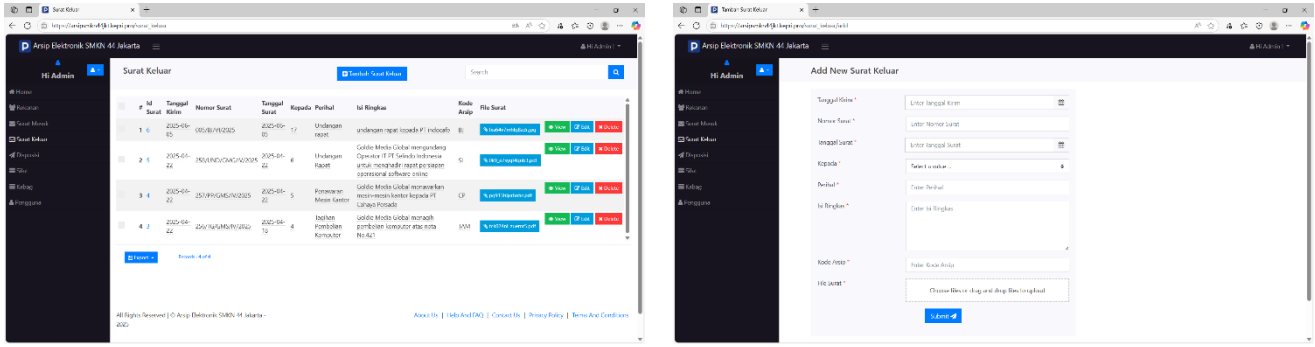

Figure 6. Menu Display and Details for Filling in the Incoming Mail Form

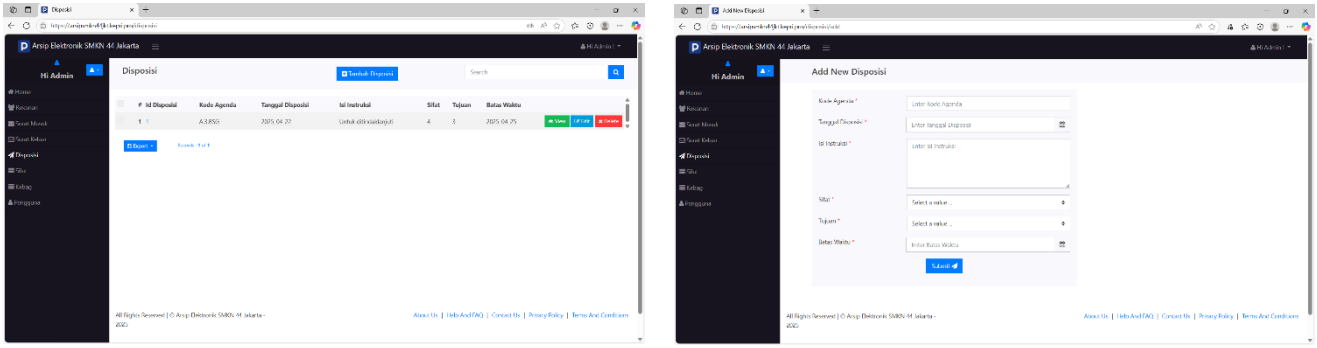

Figure 7. Menu Display and Details for Filling in the Disposition Letter Form

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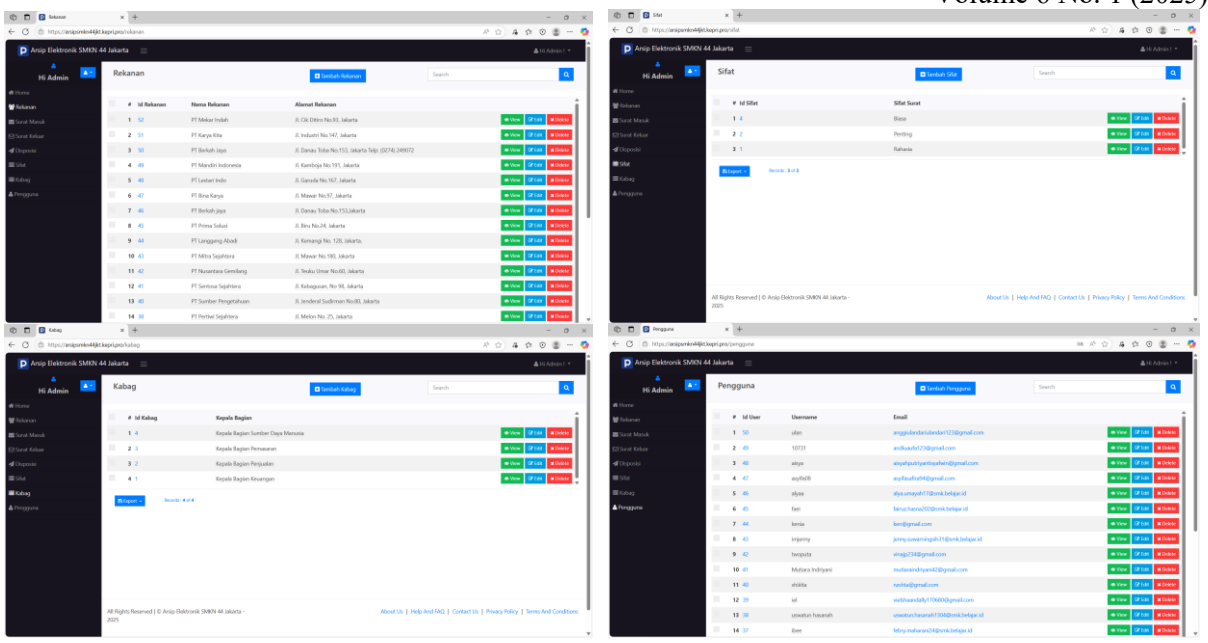

Figure 8. Partner Menu View, Characteristic, Section Heads and Users

The function of the partner form, nature, and section head is to simplify the process of inputting letter data. Because by adding data to the three forms, users can fill out the letter form simply by using the dropdown feature. This feature allows users to automatically select data from previously entered information. As for the user form, later registered users only need to enter the username and password that have been registered previously.

Expert Validation Results

After the PHPRAD-based Electronic Archive learning media has been developed, the next step is to carry out validation and trials on student responses to measure its feasibility. Research on the development of Web-assisted digital archive learning media has been previously conducted by Setyani & Bukhori (2022) with the results of the material validation test of 98.18% and the results of the media validation test of 97.71%. To test the validation, in this development research, researchers needed a material validator and a media validator with 2 validators each. The material validation test was carried out by 2 teachers of SMK Negeri 44 Jakarta, while the media validation test was carried out by 2 lecturers from the Faculty of Economics and Business. The results will later be analyzed in the form of quantitative and qualitative descriptive. The overall validation data results are explained in Table 3, namely:

Table 3. Data From the Results of the Feasibility Validation Test by Experts

Validator	Total Score	Maximum Score	Percentages	Criteria
Material Expert I	58	60	96,67%	Very Suitable
Material Expert II	58	60	96,67%	Very Suitable
Media Expert I	48	60	80,00%	Suitable
Media Expert II	44	60	73,33%	Suitable
Average Percentage			**86,66%**	**Very Suitable**

Source: Data Processed by Researcher (2025)

Referring to the information presented in Table 3, it can be seen that the average validation result is 86.66%. Therefore, it can be concluded that PHPRAD-based Electronic Archives as a learning medium is very suitable for use in digital archiving materials, especially

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for practical activities in managing archives digitally in Phase F of the Office Management Department of SMK Negeri 44 Jakarta.

Student Trial Results

After the PHPRAD-Based Electronic Archive media has gone through the revision process and has been declared feasible by the validator, the next stage that the researcher does is implementation. The activities that the researcher does during this implementation stage are conducting direct trials on users, namely Phase F Office Management Students of SMK Negeri 44 Jakarta. In this case, there are two stages of trials that will be carried out, including Limited Trials which will be carried out with the assistance of 15 Phase E Office Management Students and Field Trials which will be carried out with the assistance of 32 Phase F Office Management Students.

Table 4. Student Response Questionnaire Results Data

Subject Trial	Total Score	Maximum Score	Percentages	Criteria
Phase E X MP 2	688	720	95.55%	Very Suitable
Phase F XI MP	1231	1536	80,14%	Suitable
Average Percentage			**87,84%**	**Very Suitable**

Source: Data Processed by Researcher (2025)

Based on the known information presented in Table 4, it can be seen that the average response results of students by limited trial students were 95.55%. In addition, there was a field trial that obtained an average result of 80.14%. Therfore, it can be concluded that PHPRAD-based Electronic Archives as a learning medium is very suitable for use in digital archiving materials, especially for digital archive management practice activities in Phase F of the Office Management Department of SMK Negeri 44 Jakarta.

Discussion

This research focuses on developing an Electronic Archive learning medium based on PHPRAD in website format, aiming to make archival material more engaging and relevant for students. The development process adopted the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). The initial analysis phase involved identifying student, media, and curriculum needs through surveys, observations, and curriculum analysis, which revealed students' desire for contextual learning media to prepare for internships. Subsequently, the design phase involved planning the interface and media elements, followed by the development phase where the Electronic Archive website was built using PHPRAD and XAMPP, and a feasibility test was conducted by material and media experts (Rachma et al., 2023).

This learning medium underwent a comprehensive series of feasibility tests. Validation results from material experts showed a very high feasibility percentage 96.67%, indicating the material was well-presented and easy to understand, aligning with previous findings (Setyani & Bukhori, 2022). Media experts provided an average feasibility percentage of 76.66%, with suggestions for design improvements, also consistent with other studies (Amalia & Panduwinata, 2022). Furthermore, a limited trial with 15 students resulted in 95.55% "Very Feasible," and a field trial with 32 students showed 80.14% "Feasible." Overall, the average feasibility from all parties was 87.06%, which supports findings from similar research (Almahdi & Pahlevi, 2020). This collectively confirms that this Electronic Archive learning medium based on PHPRAD is highly feasible and effective for use in digital archiving learning, particularly in enhancing students' skills for entering the professional office environment (Setyani & Bukhori, 2022).

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CONCLUSION AND RECOMMENDATION

The development process of PHPRAD-based Electronic Archive Learning Media is carried out by adopting the ADDIE development model which consists of five main stages. The first stage is analysis, this stage aims to identify learning problems and determine the right solution while still referring to student needs for learning media. The second stage is design, focused on designing the media development flow, while preparing various elements and supporting documents for the next stage. The third stage is development, which includes the process of creating PHPRAD-based learning media, including an assessment of feasibility based on the quality of material delivery and media effectiveness. The fourth stage, namely implementation, is carried out by testing learning media in a real environment, either through limited trials or field tests in the classroom. Finally, the evaluation stage aims to perfect the learning media to be more optimal and in accordance with the needs of students as the main users.

This research and development concluded that creating a PHPRAD-based Electronic Archive learning media on digital archiving material for Phase F students majoring in Office Management at SMK Negeri 44 Jakarta. Based on the results of the validation assessment from the material expert validator of 96.67% and the media expert validator of 76.66%. Meanwhile, the results of student responses based on the implementation of limited trials and field trials obtained an average percentage of 87.06% and were included in the "Very Suitable " category. Based on these results, it can be concluded that the PHPRAD-based Electronic Archive learning media is "Very Suitable" to be used in the learning process.

The implication is that this media serves as an innovative solution that can enhance the quality of learning and students' practical skills, preparing them for the workforce. Nevertheless, this research has limitations, such as incomplete curriculum coverage, its nature as a simulation medium which differs from actual enterprise software, and the technical flexibility limitations of PHPRAD. Therefore, it is recommended for future research to develop additional modules to supplement the material, enrich simulation scenarios through industry collaboration, and consider a hybrid development approach to overcome the existing technical limitations.

REFERENCES

Abdul, M., Azis, M., Aliya, N., Antero, P., & Yunizar, R. E. (2024). Web Development of SIPARDI as a Digital Archive Storage Information System at SMA Jenderal Sudirman Kalipare. 3(3), 1–13. http://conference.um.ac.id/index.php/pses/article/view/9607

Auliya, F. A., Fitriasari, E., Nurunnisa, M., & Marini, A. (2023). Pengaruh Penggunaan Media Pembelajaran Interaktif Terhadap Hasil Belajar Siswa Di Sekolah Dasar. *Urnal Pendidikan Dasar Dan Sosial Humaniora*, *2*(8), 953–954. https://doi.org/https://doi.org/10.53625/jpdsh.v2i8.5765

Branch, R. M. (2009). *Instructional Design: The ADDIE Approach*. New York: Springer.

Febriani, E., Zulaihati, S., & Adha, M. A. (2024). Creation of Google Sites-Based E-Modules for Digital Document Elements at High Vocational Schools. *Jurnal Pendidikan Ekonomi, Perkantoran, Dan Akuntansi*, *5*(1), 63–75. https://doi.org/10.21009/jpepa.0501.07

Martini, T. (2021). Pengelolaan Arsip Elektronik. *Jurnal Komputer Bisnis*, *14*(1), 12–20. http://jurnal.lpkia.ac.id/index.php/jkb/article/view/324

Mufarridah, D. S. Z., & Susantiningrum, S. (2024). *Peningkatan hasil belajar siswa melalui penerapan media "e-arsip" berbasis microsoft access*. *8*(6), 581–589. https://doi.org/https://dx.doi.org/10.20961/jikap.v8i6.90502

Mufidah, Y. A. (2013). Efektivitas Kerja Pegawai Dalam Penggunaan. *Jurnal Pendidikan*

Administrasi Perkantoran (JPAP), *1*, 3–4. https://ejournal.unesa.ac.id/index.php/jpap/article/view/4031

Muttalib, A. N., Ratnawati, Ismail, N. H., & Nurkhalizah, S. (2024). *Efektifitas Penggunaan Media Pembelajaran Interaktif Dalam Meningkatkan Motivasi Belajar Siswa Dalam Kurikulum Merdeka di UPTD SDN 5 BARRU*. *8*(10), 21–31. https://oaj.jurnalhst.com/index.php/jpi/article/view/5052

Permana, B. S., Hazizah, L. A., & Herlambang, Y. T. (2024). Teknologi Pendidikan: Efektivitas Penggunaan Media Pembelajaran Berbasis Teknologi Di Era Digitalisasi. *Khatulistiwa: Jurnal Pendidikan Dan Sosial Humaniora*, *4*(1), 19–28. https://doi.org/10.55606/khatulistiwa.v4i1.2702

Ramadan, M. D., & Yulianingsih, E. (2024). *Sistem Informasi Perpustakaan Berbasis Website Pada Pepustakaan MAN 1 Palembang*. *03*, 367–379. https://repository.unikom.ac.id/54505/

Santoso, B., Muhidin, S. A., & Winata, H. (2023). *Jurnal Pendidikan Manajemen Perkantoran Inovasi Pembelajaran : Software Pendukung Pembelajaran*. *8*(2), 259–266. https://doi.org/https://doi.org/10.17509/jpm.v8i2

Setyani, E. E., & Bukhori, I. (2022). Pengembangan Sistem Arsip Elektronik Berbantuan Web Sebagai Media Pembelajaran Untuk Meningkatkan Keterampilan Pratikum Peserta Didik. *Economic and Education Journal (Ecoducation)*, *4*(2), 249–263. https://doi.org/10.33503/ecoducation.v4i2.1835

Syamia, N., Shadrina Lubis, A., Hera Zabni, N., & Ikhsan Rifki, M. (2024). Web-Based Document Archiving Information System in Commission C Dprd of North Sumatra Province. SAINTEKBU: Journal of Science and Technology, 16(01), 16. https://ejournal.unwaha.ac.id/index.php/saintek/article/view/4364

Syavira, N. (2021). Pengembangan Media Pembelajaran Berbasis Powerpoint Interaktif Materi Sistem Pencernaan Manusia Untuk Siswa Kelas V Sd. *OPTIKA: Jurnal Pendidikan Fisika*, *5*(1), 84–93. https://doi.org/10.37478/optika.v5i1.1039

Wasiyah, Mariati, Fitriana, Y., & Bakara, T. (2023). Efektivitas Penggunaan Media Pembelajaran Terhadap Aktivitas Mengajar Guru di Kelas. *EDUKASIA: Jurnal Pendidikan Dan Pembelajaran*, *4*(1), 205–212. https://doi.org/10.62775/edukasia.v4i1.227

Wijaya, T., Sanjaya, H., Rahman, A., Farida, I., & Alam, I. A. (2024). *Development of the Archive Management System (Leadership Documentation) in the Leadership Communication Materials Section of Lampung Province*. *1*. https://doi.org/https://doi.org/10.3390/xxxxx

Wulandari, A. P., Salsabila, A. A., Cahyani, K., Nurazizah, T. S., & Ulfiah, Z. (2023). Pentingnya Media Pembelajaran dalam Proses Belajar Mengajar. *Journal on Education*, *5*(2), 3928–3936. https://doi.org/10.31004/joe.v5i2.1074