

Improving Student Archival Management Competency by Using Codeigniter Web-Based e-Archive

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ABSTRACT

Acceleration and development of communication and information technology requires lecturers to creatively optimize technology in learning activities. Therefore, this research needs to develop and build codeigniter web-based learning media products to improve student archival competencies. This research model is Research and Development using Borg and Gall model. Data analysis techniques used are descriptive percentage and independent for sample t-test. The results of this research and development is a media learning developed there is a menu of scanned documents, so it does not require the transfer of archive media to change the format of archives in electronic archive storage activities and can be used in learning activities carried out online. This learning media has been declared very valid and worthy of use in learning by media and material experts. The results calculating independent sample t-test and the equal of variances has assume section are known sig values. (2-tailed) of $0.000 > 0.05$, it making conclusion there is big differences on the student of archival management competency on experimental and control class.

Keywords: Archival management competencies, e-Archive.

1. INTRODUCTION

The acceleration of technology information and communication in academic process is currently growing very fast, moreover, the implementation of Distance Learning activities. Distance learning is required by utilizing the advancement of technology for educational objectives to be achieved [1], [2].

Technological advances are inevitable from life, because technological advances are progressing with the advancement of science that will increasingly develop, the latest innovations will always emerge that provide positive impacts and benefits for human life [3]. While learning media is a tool or instrument used in learning activities, which integrates between software or learning materials and hardware or learning tools [2]. Learning media that is now starting to diverse following the development of science and technology, namely electronic-based learning media that has now been used as an alternative to learning in Indonesia in conducting learning activities from home online, one of which is the archival system.

Archival System designed in which there is a combination of the preparation of archival process

elements to obtain solutions or solve archival problems, so as to achieve the goals that have been set [4], [5]. Archival System developed in this research is web-based e-archive Codeigniter. Web is an information system that uses the internet and is presented in the form of hypertext that can be used to store, move, retrieve, format, display remote communications and information digitally [6]. Codeigniter can be used to develop dynamic php applications [7], [8]. The hope of developing this e-archive system is that although online learning students can still practice and improve student competence in the field of archival management.

Some previous studies that also discuss this theme are research, [5], [8]–[20], based on the researches concluded that website-based electronic archival system that can be accessed online can solve the problem of difficulties in conducting digital archival practicum in learning activities, the presence of archival systems support and improve the quality of office course learning activities.

However, based on the results of interviews with lecturers at Universitas Negeri Malang, it was found that the learning media used in the form of AR (Augmented

Reality) is less varied, even though archival courses in Indonesia are practical courses. This certainly causes students to tend to be bored, less enthusiastic and practical activities take a long time. The role of learning media is also sometimes less optimal, while the facilities owned by all students in the school, namely data package assistance, are still not optimized as a means to update learning media. Therefore, this research aims to develop and build web-based learning media products codeigniter that tested its feasibility and effectiveness in improving the competence of student archival management in archival management courses for undergraduate students of Office Administration Education at Universitas Negeri Malang.

Electronic archival development researches usually use the web [11], [12], [17]. However, the development of electronic archival using the web in previous research is not based on Codeigniter. In addition, the development of web-based learning media codeigniter in the same course has also been done before, but the software used in the study is the website [5]. Based on this, researchers made a breakthrough by using electronic archival system in developing web codeigniter-based learning media, where the learning media in this study focused on archival learning materials on Course Learning Outcomes (CLO) Skilled in Applying Archive Storage System in accordance with Archive Storage Procedures.

2. METHODS

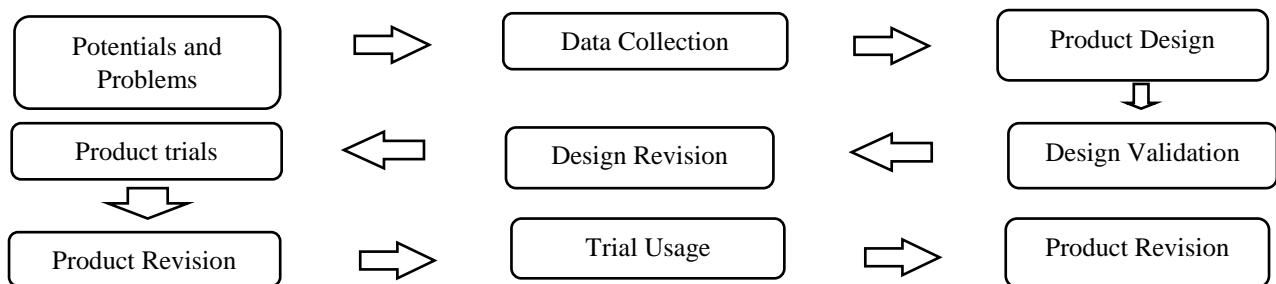


Figure 1. Research Steps

This research uses the Borg and Gall model which been modified into nine steps to shorten the time and state of the field [21]. In addition, researchers also feel that the purpose of the study is to produce products, know the feasibility of products, and know the differences in archival skills of students who use with those who do not use the developed product, can already be achieved in the ninth stage.

The first step, the researchers conducted an analysis of potential and problems related to archival course learning activities. The second step, researchers gather information related to problems that occur in educational institutions through interviews, national and international research results, as well as relevant books. Step three, researchers designed learning media products that will be developed and can be a solution to problems found in the steps of potential and problems and information collection and start making learning media according to the design specified in the previous step. The fourth step, the media produced by researchers tested the feasibility by the validators, namely one media expert and one material expert. Step five, the validated product is revised based on inputs and suggestions both verbally and in writing listed on assessment questionnaire of materials and media experts. Step six, a revised product was tested on six students who were a small group trial in this study. Step seven, the products that have been tested in small groups are revised according to the inputs of students

both verbally and in writings listed on the results of the small group trial questionnaire. The eighth step, the revised product was then tested in a large group involving 73 students offering L and offering LL (undergraduate program) Education Administration Office as an experimental class while 74 students offering LLL and offering MMM (undergraduate program) Education Office Administration as a control class still using ar learning media (Augmented Reality). The ninth step, the researchers revised if in large group trials there are still weaknesses of products developed by researchers.

The data produced in this research include qualitative and quantitative data, where quantitative data consists of data validation results of material experts, data of media validation results, data of small group trial results, and data of student archival skills. Qualitative data was obtained through the withdrawal of conclusions based on general opinion, advice, and criticism from material and media experts, and six small group of trial students. Data validation results from material, media experts, and small group trials were analyzed using descriptive percentage methods to demonstrate the feasibility level of learning media. Meanwhile, student archival skills data was analyzed using an independent sample t-test to show differences in student archival skills in experimental classes and control classes.

3. RESULTS AND DISCUSSION

The learning materials produced in this research is the learning media of codeigniter web-based electronic archival system Course Learning Outcomes (CLO) of

Archive Management course Skilled in Applying Archive Storage System following Archive Storage Procedure. Codeigniter Web-Based E-Archive consists of the menus described in Figure 2 below:

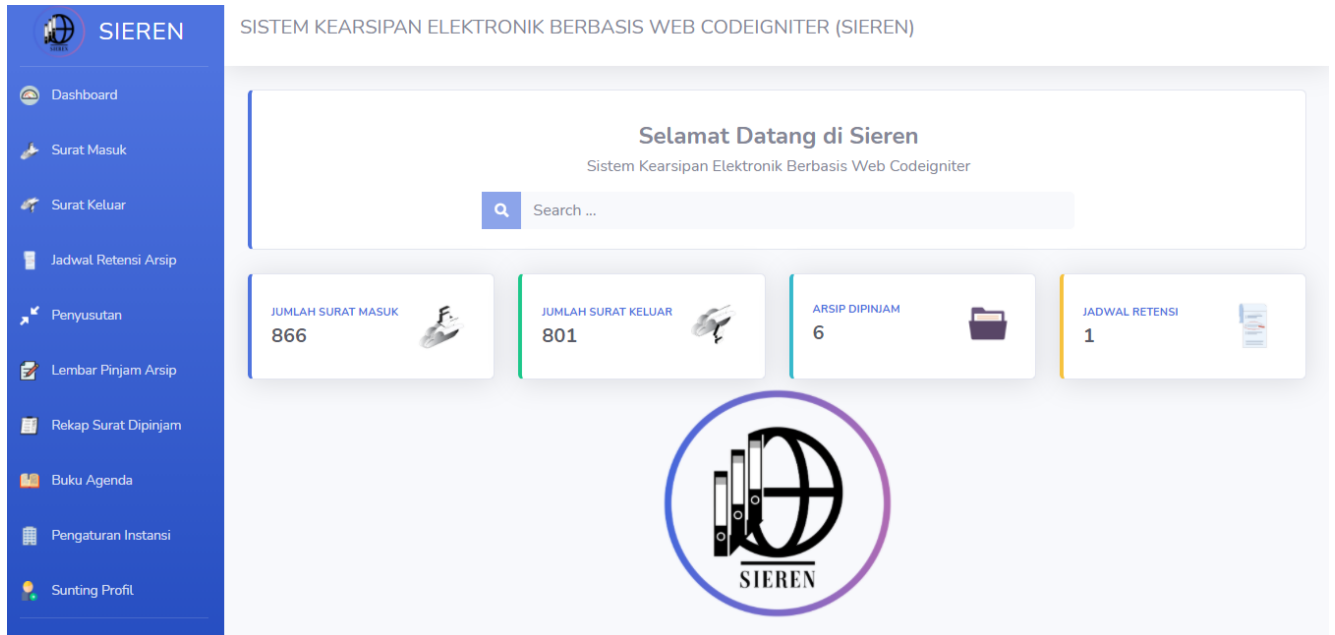


Figure 2. Menus in SIEREN

Table 1. Data of Overall Validation Results

No.	Validation	Percentage	Validity Criteria
1.	Material Experts	98.00%	Very Valid
2.	Media Experts	98,00%	Very Valid
3.	Small Group Trial Students	94.00%	Very Valid
	Average	96,76%	Very Valid

Table used by permission ©Muhajiroh, Nailatul 2020. The data validated the whole.

Based on Table 1, it is known that the average percentage of validation as a whole is 96.76%, so we have conclusion that the learning media developed by researchers, namely E-Archive Web-Based Codeigniter, is declared 'Very Valid' and worthy of use in archival learning at Universitas Negeri Malang. This is similar to previous research, where the validation results of material, media and small group trials are used as the basis for determining whether the learning media developed is feasible or not used in learning [8], [22], [23].

The measurement point in the form of validity refers to the results of measurements made to find out how

many aspects in the quantitative realm in the measurement instruments expressed by score [24]. Codeigniter Web-Based E-Archive presents a document scan feature that can help electronically store archives more easily and efficiently, as it does not require media transfer to change the format of archives in electronic archive storage activities. The efficiency and effective use of technology depends on the availability of hardware and software [25]. The display of the document scan feature can be seen in Figure 3 below:

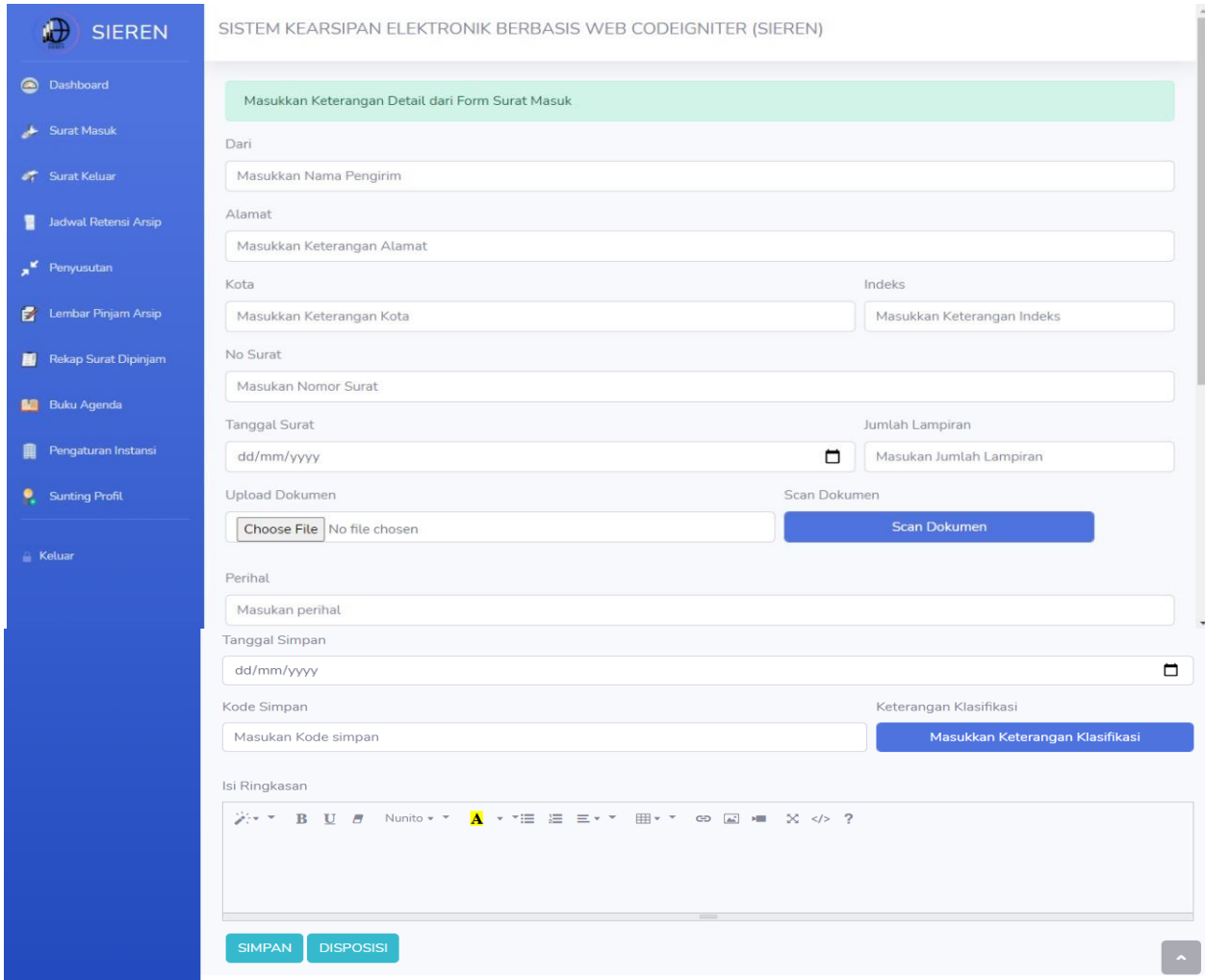


Figure 3. Display of Document Scan Feature

While the results of the independent sample t-test on the archival skills data of control class students and experimental classes are presented in Table 2 below. And based on the independent sample t-test output table in the equal variances assumed known sig value. (2-tailed) of $0.000 > 0.05$, then as the basis of decision

making in the independent test sample t-test can be concluded that H_0 is rejected and H_a accepted. This significant difference in student archival skills proves that the using of learning media developed by researchers can effectively improving student archival skills [26].

Table 2. Independent Sample T-Test Results

		Independent Sample t-Test						
		t-test for Equality of Means						
		T.	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper	
Skills Archives student	Equal variances assumed	7.172	145	.000	3.906	.545	2.829	4.982
	Equal variances notes assumed	7.140	101.094	.000	3.906	.547	2.821	4.991

Table used by permission ©Muhajiroh, Nailatul. 2020. Results of the test independent sample t-test.

The significant improvement of student archival skills in this study is due to the practice of using this learning medium, students are more interested and motivated to learn independently. In addition, there is ease in doing practicum storing mail, because the data that has been inputted will be automatically stored, so

that the practical work becomes faster. As research conducted by Ziyu and Haining mentioned that digital archives have advantages such as archival activities that are done faster [20]. The display of the results of letter storage work by students in the Codeigniter Web-Based E-Archive can be seen in Figure 4.

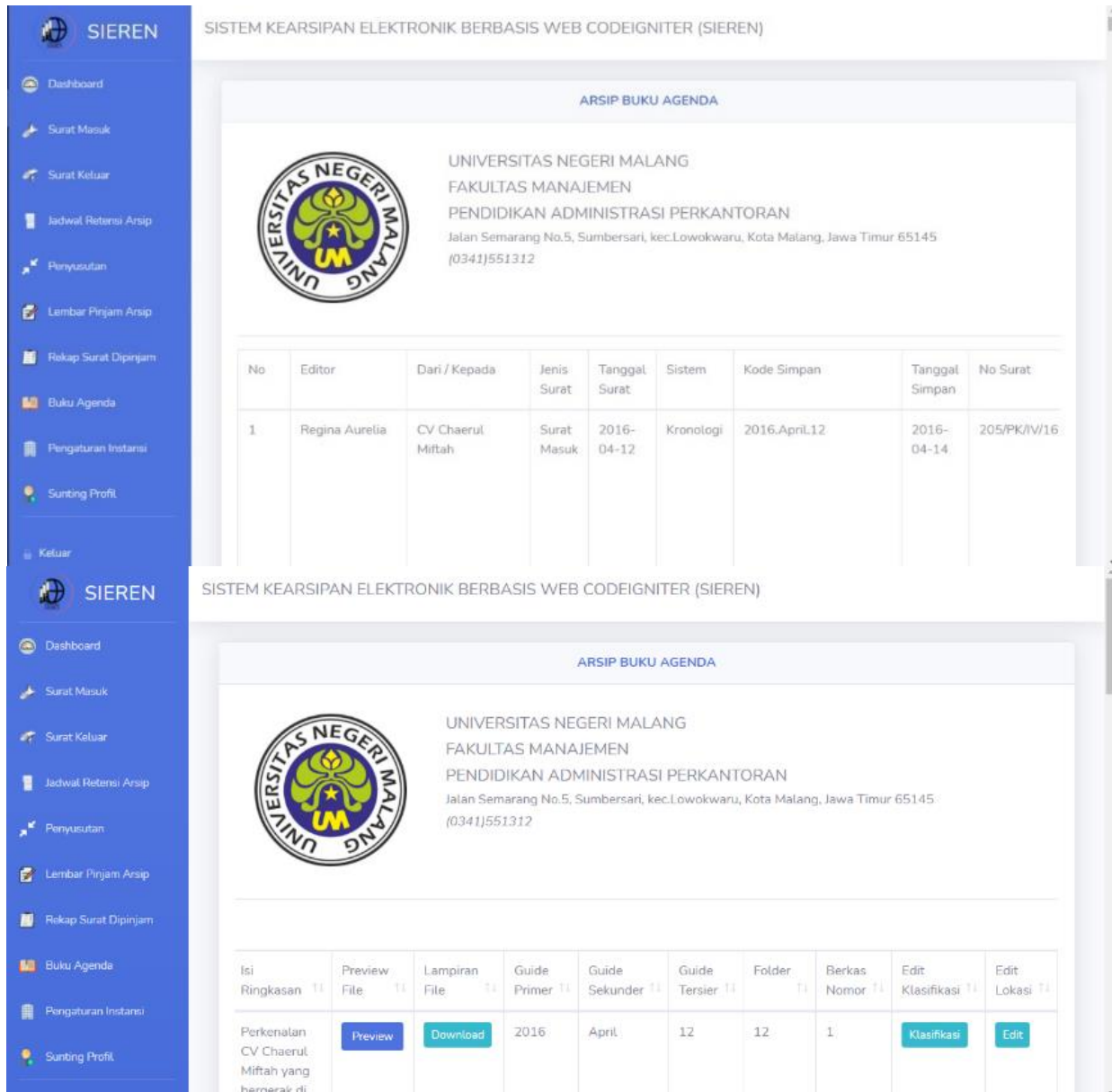


Figure 4. Views of The Results of Letter Storage Work by Students in Codeigniter Web-Based E-Archive

In addition, the existence of a guidebook and a guide to the use of video, the design of the display of web-based E-Archive Learning Media Codeigniter interesting, images with good quality, as well as good video display quality, was found to be able to make the experimental class become more enthusiastic and interested in conducting electronic archive storage activities. Electronic archival made with four concepts,

namely: digitization of information, digital archive files, modernization of records management, and file sharing services memiliki banyak the advantages obtained among others are archival activities conducted to be faster and more convenient [20]. Codeigniter Web-Based E-Archive view can generally be seen in Figure 5 below:

SISTEM KEARSIPAN ELEKTRONIK BERBASIS WEB CODEIGNITER (SIEREN)



Figure 5. The SIEREN View in General

Student archival skills are improved because Codeigniter Web-Based E-Archive makes it easier for students to do practicum storing letters, because the data that has been inputted will be automatically stored, so that practicum work becomes faster. While in the control class students must practice storing letters using video and doing manual mail storage. As research conducted by Ziyu and Haining mentioned that digital archives have advantages such as archival activities that are done faster [20].

4. CONCLUSION

This research results in e-archive learning media based on Codeigniter Web to improve student archival skills in Course Learning Outcomes (CLO) archival courses Skilled in Applying Archive Storage System following Archive Storage Procedures in Undergraduate Students of Office Administration Education at Universitas Negeri Malang. This learning media is called SIEREN and can be accessed online by using Google Chrome.

The learning media in this study has been declared 'Very Valid' and deserves to be used in archival learning through validation by material, media experts and small group trials. In addition, codeigniter Web-Based E-Archive has been proven effective to improve student archival skills in large group trials based on independent sample t-test results. Codeigniter Web-Based E-Archive also allows learning anytime and anywhere, even independently without having to be tied to face-to-face activities on campus, so this application is useful when learning cannot be done face-to-face.

Codeigniter Web-Based E-Archive focuses only on materials and is limited to archives used in archival courses, so it is expected that the next researchers to develop learning media in other courses and CLOs and have creativity in better design to make the resulting learning media more interactive and interesting.

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