Information System of International Conference Management Based on Web

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Article Info	ABSTRACT
  Corresponding Author: Ahmad Sidiq Author, Department of Informatics Education, Sebelas Maret University, Jl Ahmad Yani, no 200, Pabelan, Kartasura, Surakarta, Jawa Tengah, 57169, Indonesia. Email: ahmadsidiq355@gmail.com	Technological advances can be utilized to make information dissemination faster and more efficient. One example of the use of technology as a medium of information and management in the implementation of the conference is an information management system based on the WEB. Based on the observations that have been conducted, found various problems, among others for the preparation of activity data reports, data participants, and so forth, actually already utilizing information technology, but still less effective. So many weaknesses that appear like; less effective and efficient in data processing, the time required for the preparation of reports long enough and the risk of error becomes large. Then from the side of presence also still printed manually. In addition, all the participants who register will be placed certificates, although the participants are not present in the conference, this happens because of the organizers difficult to sort out which participants are present and not present. In this article presented the feasibility test results of the conference management information system developed. Testing is performed on system experts, substance experts, and users. The expert testing system using the instrument referring to ISO 9126 get 93% percentage. Expert testing of substance-using instrument referring to ISO 9126 get 86% percentage. While testing of users using the instruments that refer to ISO 9126 aspects of functionality gets an average percentage of 88.2%.

1. INTRODUCTION

College is the last educational institution of the formal education hierarchy that has three missions of education, research and community service or better known as "Tri Dharma Perguruan Tinggi". In an effort to improve the effectiveness, efficiency, productivity, creativity, innovation, quality and relevance of "Tri Dharma" implementation, it is necessary to conduct college cooperation. In relation to the cooperation of universities, as explained in detail in the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 14 of 2014, it is stated that one of the forms of cooperation among universities is to organize a joint conference (Article 7 letter m). Therefore, one of the participation activities undertaken by universities in an effort to support the implementation of "Tri Dharma Perguruan Tinggi" is to hold scientific activities such as conferences, workshops or training.

In addition to supporting the implementation of "Tri Dharma Perguruan Tinggi", conference activities also affect the accreditation of universities as mentioned in Standard and Accreditation Procedures of college Institutions 2011 BAN-PT standard 7.2 on the reference of quality excellence of research, service / community service, and cooperation held to and related to the development of college quality. In standard 7.2, it is explained that universities create a conducive climate for lecturers and students to creatively and innovatively carry out their roles and functions as the main actors of quality and well-planned research. The universities facilitate and carry out dissemination of research results in various forms, including the implementation of scientific forums/conferences, scientific presentations in national and international forums, publications in accredited national and/or international journals.

For the preparation of activity data reports, participant data, and so forth, done by using a system that is still manual, still little touched the development of information technology. So many weaknesses that appear like; less effective and efficient in data processing, the time required for the preparation of reports long enough and the risk of error becomes large. From the side of the financial recap, so far, parties related to the financial management of conferences often find it difficult to sort out which potential participants who have paid or who have not paid conference activities. In addition, presences and identity cards at the time of the conference are also still printed manually. In addition, all the participants who register will be placed certificates, although the participants are not present in the conference, this happens because of the organizers difficult to sort out which participants are present and not present.

From the above problems, developed a conference management information system that can support conference activities ranging from registration to printing certificates that produce the data needed for complete and accurate reporting. This information system is made online web-based so that it can present information in real-time and periodical and can be accessed without limited space and time.

Research on conference management information system development conducted [7] and his research entitled "Development of Conference Registration Information System, Workshop and Training Using Method Development System Life Cycle Model Waterfall (Case Study STMIK Himsya Semarang) ". The effect of the outcome of the research activity is 1) Facilitate the registration officer in entering, processing, conducting the search, and reporting the data of the participants of the conference, workshop and training. 2) Improve the service of registration officers to the registrants, 3) Reduce the error rate in the task. 4) Make the registration officer job more efficient. Then [1] in his research entitled "Designing Conference Registration System with MS. Visual Basic PT. OPTIONS - Denpasar ". The result of the research is the system that is produced more complete than before which has been able to accommodate all the interests of conference organizers both in terms of registration of participants, management of conference data, or payment consisting of three lines of cash, transfers, and credit cards. Suggestions from the research are the addition of more complete features such as ID Card printing, card checking with a barcode system, data export facility to other software, and so forth. Then [3] in his research entitled Design And Implementation Of Online Submission and Peer Review System: A Case Study Of E-Journal Of The University Of Zakho, the results of this study in the form of each module design of online paper submission and peer-review process. Then [4] in his research entitled Architecture of a Conference Management System Providing Advanced Paper Assignment Features, the results of this study are the design of the conference management information system on the submission process and the review process. One of the advantages in this research is the existence of an algorithm that is able to detect the level of plagiarism of each paper

2. RESEARCH METHOD

The research method used is R and D (Research and Development). According to [8] in research R and D consists of 10 steps namely, (1) Potentials and problems; (2) Collection of data or information ; (3) Product design; (4) Design validation; (5) Design revisions; (6) Product trial; (7) Product revisions; (8) Usage test; (9) Product revisions; and (10) Mass production.

The first stage is to find the potential that can be developed and the source of the problem that occurred, then conducted data collection or information related conference management information systems and various existing literature studies. After that make a design to the product that will be developed and then presented it or presented in the discussion forum to find shortcomings in the design that has been made to be able to make design improvements. After the finished product design, then the product can begin to be developed to be further tested the product. The purpose of this product trial is to look for the deficiencies found in products that have been developed for product revision. After passing the product trial process then the next experimental use, trial usage aimed to know the product deficiencies as a repair material before the last stage of the mass product manufacture.

Then for the development of management information system of this conference using waterfall development method l according to [5], where there are five stages namely, Communication, Planning, Modeling, Construction and Deployment.

In the communication stage, information gathering related to the process of organizing conference along with the deficiencies that still exist. Then at the starting planning stage defined functional requirements of conference management information system. Furthermore, the modelling stage, at this stage made the design of system development, ranging from database design, display design, data flow, and business processes of the conference management information system. Then start the system development at the construction stage. The last is the deployment stage; at this stage feasibility testing of the system has been developed.

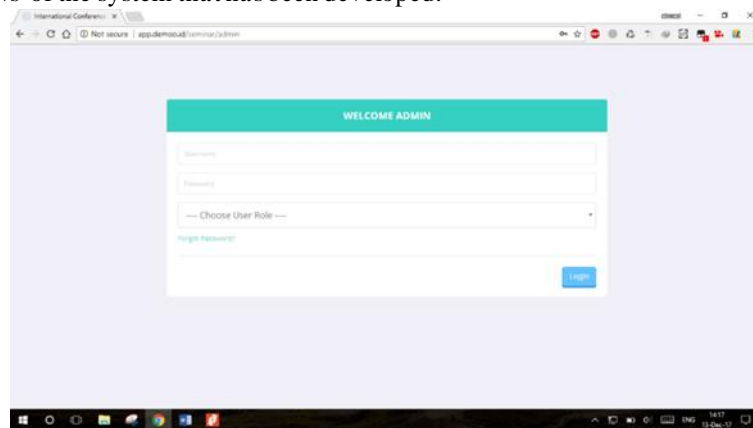Here are some views of the system that has been developed.
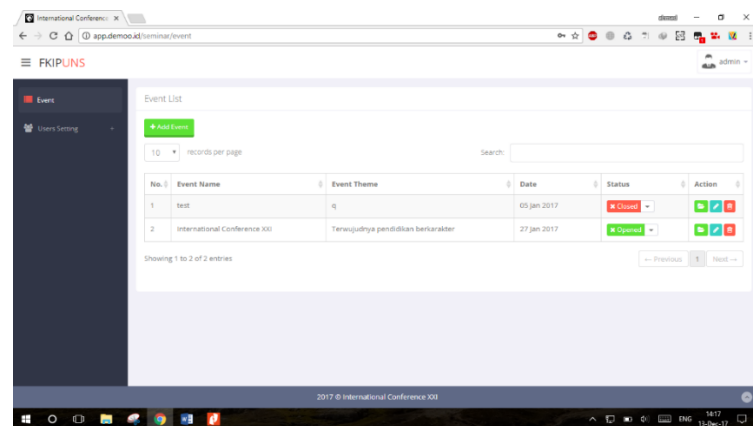

Figure 1. Login page
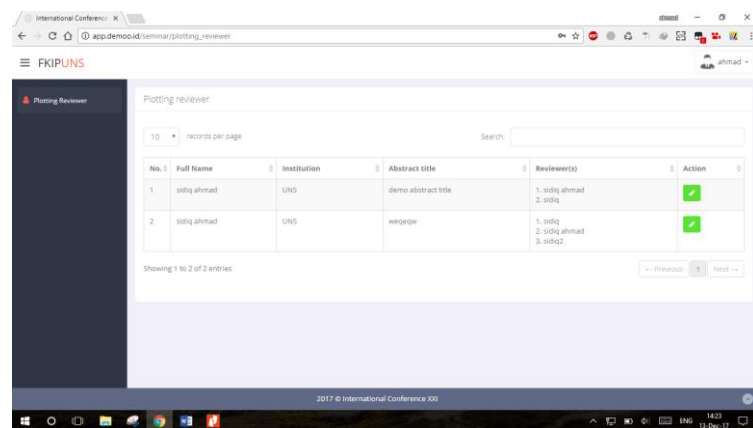

Figure 2. Lists of the conference events page
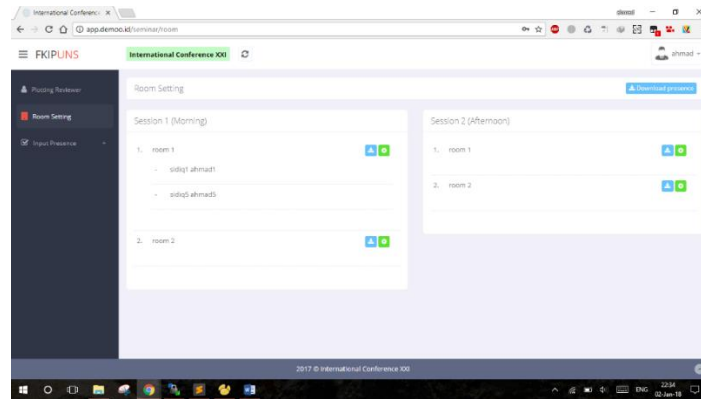

Figure 3. Plotting reviewer page
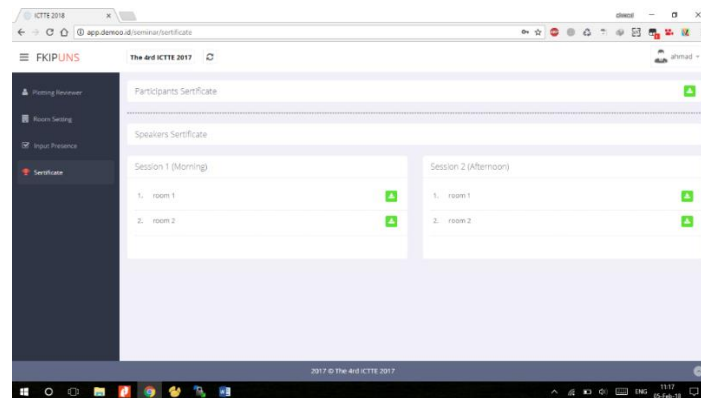
Figure 4. Space management page

Figure 5. Printing certificate page

Then presented the results of testing the feasibility of management information systems that have been developed. This feasibility test is performed by appointing several validators, including system experts, substance experts and users. The feasibility test can be described as follows:

2.1. System Expert Testing
System expert testing is done by appointing experts who master the system as a validator. The purpose of this test is to know all aspects of ISO 9126.

2.2 Substance Expert Testing
Substance expert testing is done by appointing the expert on the substance of the organization of the conference. The purpose of this test is to determine the conformity aspects of the system with the needs and completeness of the resulting data.

2.3 User Testing
User testing is done by appointing respondents who have attended the conference. The purpose of this test is to determine the feasibility of information systems that have been developed. This test uses an instrument that refers to the functionality aspect of ISO 9126 [2].
To assess the feasibility of information systems that have been developed using a Likert scale. Data analysis is done by converting the data into a percentage with the following formula:

Then the percentage is grouped into a feasibility assessment like the table below (Riduwan, 2003):

Assessment criteria	Percentage
Very Decent	100% - 81%
Well worth it	80% - 61%
Decent enough	60% - 41%
Not feasible	40% - 21%
Very not feasible	20% - 0%

3.   RESULT AND ANALYSIS

3.1. RESULT

The result of this research is a system of information management of international conference based on WEB. Test results by information system experts can be seen in table 1.

Table 1. Experimental test results of the system

No.	Rated aspect	Value
1	The accuracy of choosing the type of software for system development	100
2	Easy access	80
3	Process and data flow	82
4	Program view	93
5	Accuracy of output	88
6	Program sustainability	90
7	General functionality	83
Average		**88**

Furthermore, for the test results of substance experts can be seen in table 2.

Table 2. Experts test results of substance

No.	Rated aspect	Value
1	System compatibility with needs	95
2	Completeness of the data generated	80
Average		**87.5**

Then for the user test result is divided into five-user, that is administrator can be seen in table 3, the operator can be seen in table 4, the reviewer can be seen in table 5, finance can be seen in table 6, and conference participant in table 7

Table 3. Administrator test results

No.	Rated aspect	Value
1	Functionality	93
Average		**93**

Table 4. Operator test results

No.	Rated aspect	Value
1	Functionality	86
Average		**86**

Table 5. The results of trials reviewer

No.	Rated aspect	Value
1	Functionality	73
Average		**73**

Table 6. Finance test results

No.	Rated aspect	Value
1	Functionality	100
Average		**100**

Table 7. Trial results of conference participants

No.	Rated aspect	Value
1	Functionality	89
Average		**89**

3.2. Discussion

The results of testing conducted by expert system consisting of 7 aspects, including the accuracy of choosing the type of software for system development with 100% percentage score, 80% Accessibility, 82% process and data flow, 83% program display, Output Accuracy 88 %, 90% program sustainability, and 93% general Functionality. The final result of the test by the system expert is 88% with the level of feasibility "Very Eligible" because it is in the range of 81 - 100.

Then the results of tests conducted by experts substance consist of 3 aspects, including the suitability of the system with the needs with 95% percentage, and completeness of the data generated 80%. The result of testing by system experts is 87.5% with the feasibility level of "Very Eligible" because it is in the range of 81 - 100.

Then the test results by the administrator earn 93% percentage which means "very feasible". Then the operator gets the percentage of 86% which means "very feasible". Then the reviewer obtained a percentage of 73% which means "feasible". Then finance gets 100% percentage which means "very worthy", the last conference participants get 89% percentage which means "very feasible".

The advantages of this international conference management information system are: (1) The developed information system is capable of performing automatic presence printing. (2) The developed information system is able to plot the reviewer against each of the conference participants' papers. (3) The developed information system is able to sort out conference participants who attend and not attend the conference as the basis of certificate printing. (4) The developed information system is able to accommodate the event conference from year to year, so the history of conference implementation every year is always recorded in the system.

Furthermore, the advantages of this system are compared with previous studies, ie, the system provides comprehensive and comprehensive features, ranging from publicly accessible information pages, account registration, paper submission, the paper review process, plotting review, conference room management, including printing presumes, until certificate printing.

4. CONCLUSION

The test results of conference management information system get the value with the percentage of 88% of system experts, 87.5% of substance experts, and 93% of users as administrators, 86% of users as operators, 73% of users as reviewers, 100% of users as finance, 89% of conference participants have ever followed. From the test results can be concluded that the conference management information system that has been developed into the category of "Very Eligible" is used.

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