Engineering And Technology International Journal
March 2022 | Vol. 4 | No. 1
E-ISSN : 2714 - 755X
DOI: 10.55642/eatij.v4i01.63

Monitoring Application in Academic Evaluation for Web-Based Teacher Performance Assessment at SMA IT Imam Syafi'i

Okta Veza[1]
[1]Ibnu Sina University, Jl. Teuku Umar, Lubuk Baja
Informatics Engineering Study Program, Ibnu Sina University Batam
e-mail: *[1]oktaveza@uis.ac.id

Abstrak

The design of the Web-Based Teacher Performance Assessment Monitoring Application at SMA IT Imam Syafi'i is an application to support the performance of related agencies. Lack of data collection and the absence of supporting applications and data that are still stored in archives and computers manually. This system is designed based on website using html, css programming language and MySQL database. While the development of the research system uses the RAD (Rapid Application Development) method with the stages of requirements, workshop design, and implementation. This application serves as a method for determining the application of monitoring techniques in the academic assessment of teacher performance. With this designed system, it will be easier for agencies to monitor the academic assessment of teacher performance. And the need to make a teacher performance evaluation report.

Keywords— Teacher Achievement Assessment, Monitoring, Web, RAD

PRELIMINARY

Teachers have a very strategic function and role in the development of the education sector, they need to be developed as a passionate profession. Law No. 14 of 2005 concerning Teachers and Lecturers Article 4 confirms that teachers as agents of learning function to improve the quality of national education. To be able to carry out its functions properly, teachers are required to have certain conditions, one of which is competence. Teacher competence is a set of mastery abilities that must exist within the teacher to realize appropriate and effective performance (Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers).

SMA IT Imam Syafi'i is the operational technical implementer of the Batam City Education Office in the implementation of guidance, supervision and evaluation of educational implementation activities. As an assessor and organizer of educational activities, the Head of SMA IT Imam Syafi'i who oversees approximately 20 educators has the duty and authority to monitor and carry out teacher performance assessments and employee work targets in schools under his control.

As a supervisor in the implementation of PKG, SMA IT Imam Syafi'i faces several obstacles. The real obstacle they have to face is the large number of teachers they have to supervise. In addition, the PKG application which still uses a spreadsheet application program is also another obstacle in the preparation of the PKG. This problem arises because the existing application is less accurate and the risk management encounters a very large error in the

evaluation process. This is certainly an obstacle, because the method of submitting PKG is still using hardcopy, so if the PKG submitted is not in accordance with the provisions, the assessor must repeat the process and review it again. Seeing the facts above, it is necessary to have a good system that can produce accurate, relevant and timely information. This website-based PKG system is expected to be a solution that can help SMA IT Imam Syafi'i in conducting and supervising assessments, so that the assessment process becomes fast, relevant and on target. So that with this new web-based teacher performance assessment application, it will be able to produce an assessment system with more effective and efficient procedures and the recapitulation process can be carried out easily and has a high level of validation.

RESEARCH METHODS

Metode System Development Life Cycle (SDLC)

At the system development stage, the author uses the System Development Life Cycle (SDLC) with a waterfall approach which consists of several stages of activity flow that run in one direction from the beginning to the end of the system development project development. The System Development Life Cycle (SDLC) is a system development cycle with several gradual processes in designing and developing the system. SDLC has stages in system development, namely planning, analysis, design, implementation and maintenance (Dwina Admella Yudhanti, et al, 2019: 323). The System Development Life Cycle (SDLC) method has several models in process-level applications. One of the developments of the SDLC is the RAD (Rapid Application Development) model. The definition of the RAD (Rapid Application Development) method according to Pressman (in the journal Aini et al, 2019), is a method used in the development of additional software whose development cycle is relatively short.

The stages involved in building software engineering itself are as follows:

Planning

Being the initial stage of system design, this stage aims to identify and prioritize the information system to be developed, the objectives to be achieved, the implementation period and consider the available funds and who will implement it.

Analysis

System analysis is research on existing systems with the aim of designing new systems or updating existing systems.

Design

System design is the determination of the processes and data required by the new system. If the system is computer based, the design may include specifications for the type of equipment to be used.

Implementation

Execution is an activity to acquire and integrate physical and conceptual resources to produce a working system. At this stage, several things are done namely: Coding, Testing, Installation.

Maintenance

As users use the system, various modifications are made to allow the system to continue to provide the necessary support. This modification is called system maintenance.

RAD (Rapid Application Development)

RAD (Rapid Application Development) is a methodology that emphasizes on a short, short and fast development cycle. The short time is an important limitation for this model. Rapid Application Development uses an iterative (repetitive) method in developing a system where a working model of the system is built at the beginning of the development stage with the aim of determining user needs. RAD has the ability to reuse existing components (reusable objects) so developers don't have to build from scratch and in less time. RAD has the following stages:

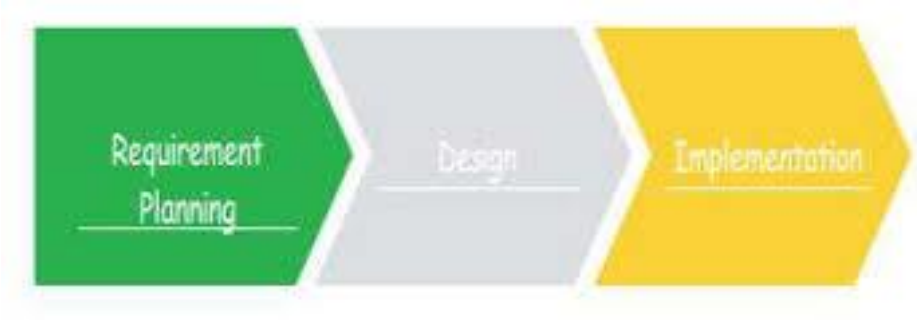

Figure 1 RAD (Rapid Application Development) Model

The stages in the RAD model can be described as follows:

Requirement Planning
At the initial stage, the customer meets with the system developer and defines the scope of the system to be built. In this research, the system that will be made is the encyclopedia system. Furthermore, by analyzing the problems and system requirements as well as solutions. For example, how do users add new information and how the information they want can be easily found and the level of user required to run the system.

Design Workshop
In the next stage, the system design process will be developed. Then the design is continued by the programmer by making application prototyping and displaying the results to users quickly. Currently, users can provide feedback on the system that has been developed for further improvement. Thus the system development process becomes faster.

Implementation
Next, the programmer develops the prototype into a program. After the system is complete as a whole, the process of testing the program is carried out whether there are errors or not before being applied to an organization. If the process has been carried out, a complete system will be produced according to the initial design.

RESULTS AND DISCUSSION

System analysis
Research and data collection on an ongoing system with the aim of obtaining complete data in order to design a new system or a system that will be updated from an ongoing system. With the data obtained will be implemented on the system to be made.

System Requirements Analysis

Based on observations made at SMA IT Imam Syafi'i, the system requirements needed are as follows:
1. Admin is responsible for entering school data, teacher data, assessor data, editing data, deleting data. Assessment result report
2. The evaluation team can enter teacher data for evaluation and be given access to conduct teacher assessments.
3. Principals, can view teacher performance appraisal data reports.

Based on the flow of the Old Information System, it can be concluded that a new database is needed to meet the needs of the Web-Based Monitoring and Evaluation Application System for Teacher Performance Assessment at SMA IT Imam Syafi'i whose features can be seen in the table below.

Table 3.1 System Requirements

No	Feature	Information
1	*Login*	Serves as access rights to distinguish what pages are allowed to be accessed by teachers/users and admin pages.
2	School Data	Serves to display school data, including school identity information, teacher data, and the assessment period.
3	Evaluation	Serves to display assessment data, and assessments that will be done on the performance of teachers at SMA IT Imam Syafi'i.
4	Data User	Serves to display displaying all users and the level of each user that has been added to the application.

System planning
System design is the next stage after analyzing the required system and getting a clear picture of what will be made. To achieve the expectation of making teacher performance appraisal applications at SMA IT Imam Syafi'i, making this application will be described using use case diagrams, database design and database relations.

Use Case Diagram
At this stage the researcher will show the proposed system process flow that will be made by showing the user system functions logically using a use case diagram, which is as follows:

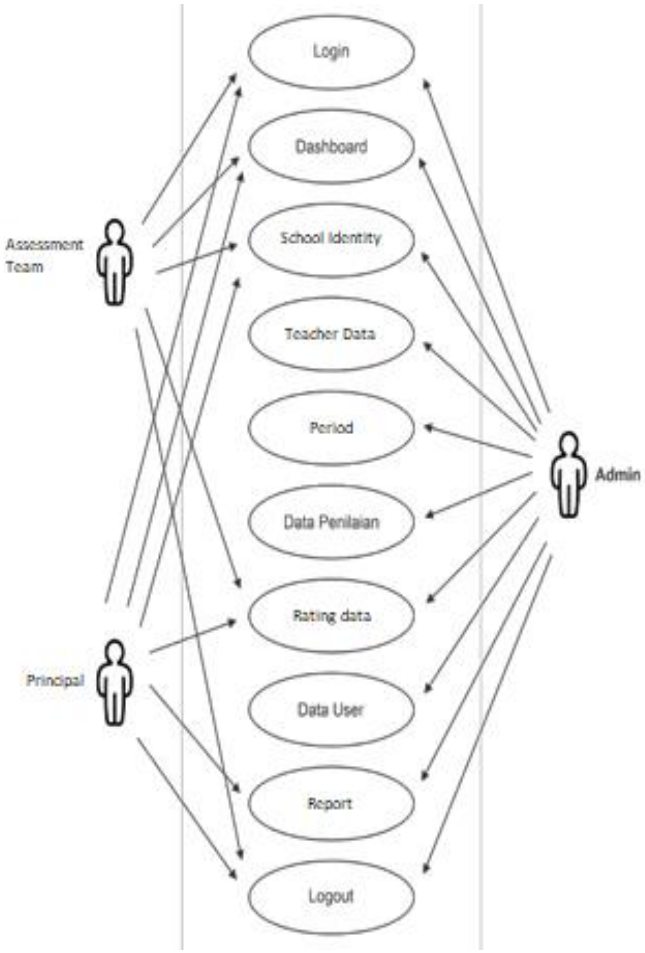

Figure 1 Use Case Diagram

Implementation

Based on the system design that has been made previously, this implementation will include a picture of the Monitoring Application in Academic Evaluation for Web-Based Teacher Performance Assessment at SMA IT Imam Syafi'i that has been run.

App View

1. On the login page, there are three users who can access the login, namely the admin, the assessment team and the school principal. And each user has different access rights.

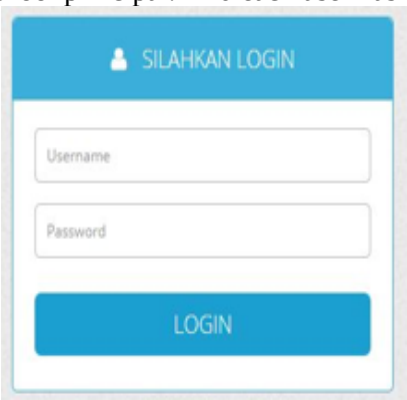

Figure 2 Login Display

he steps that must be done on the login page are:

1. Enter the registered user login.
2. Enter the password as a password to enter the application dashboard page.

Click login, the dashboard page will appear as follows:

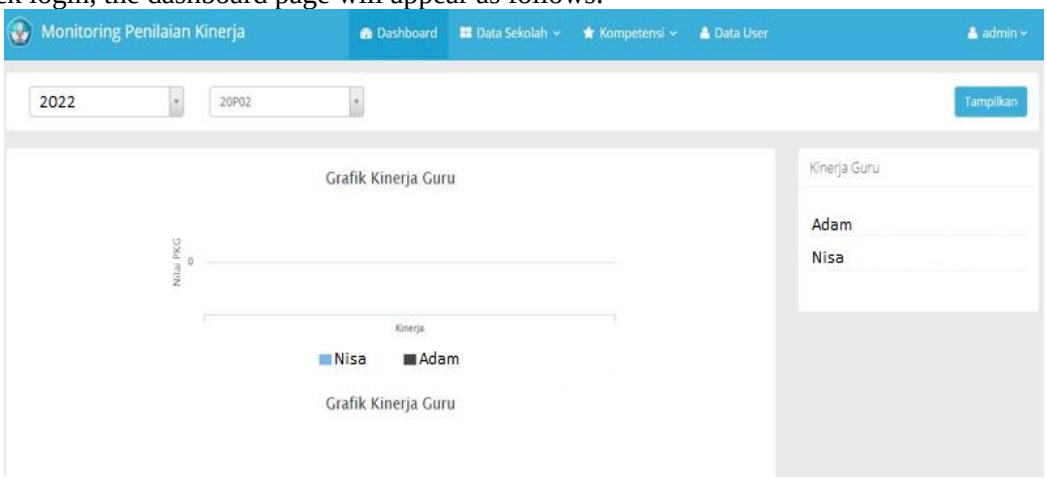

Figure 3 Teacher Dashboard Display

On the dashboard page there is a teacher's work menu including school data, competencies, and user data. For more details can be seen as follows:

1. School data display serves to display school identity, teacher data and the assessment period. The view can be seen below:

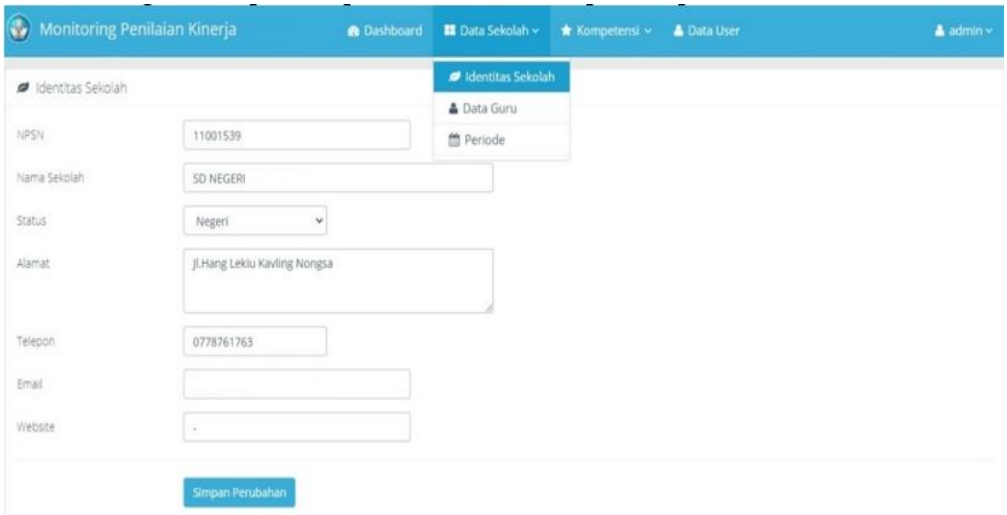

Figure 4 Display of School Data Menu

2. Display the competency menu to view assessment and assessment data at SMA IT Imam Syafi'i. The view can be seen below:

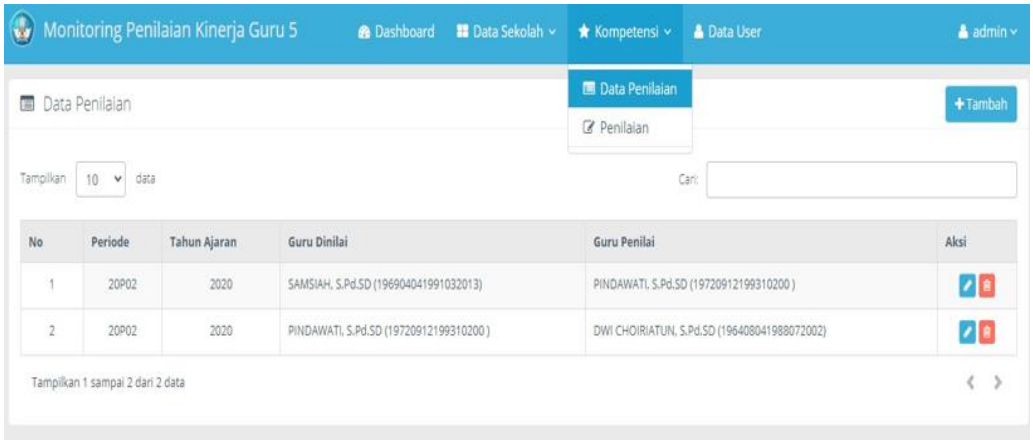

Figure 5 Display of Competency Menu

3. Display the user data menu to display all users and the level of each user who has been added to the application. The view can be seen below:

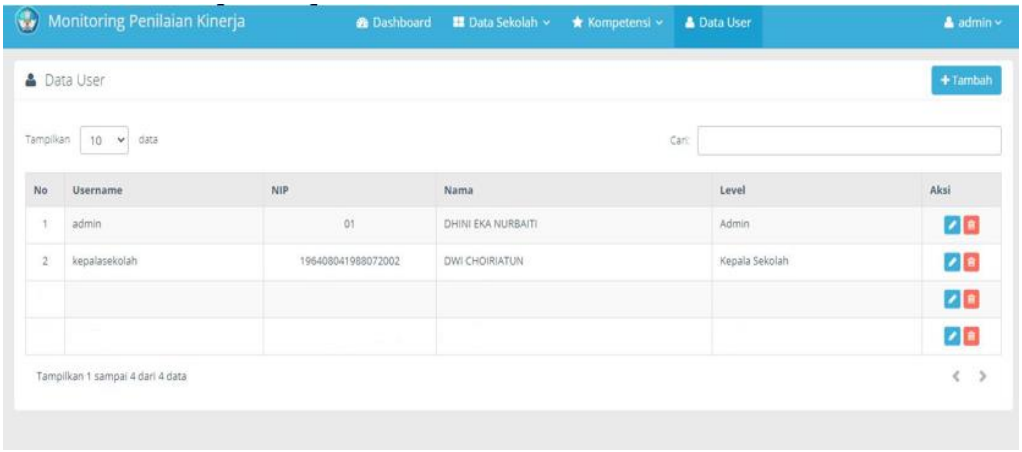

Figure 6 User Data Menu Display

CONCLUSION

Referring to the problem formulation and research objectives that have been carried out, several conclusions can be drawn including:

1. Design of Monitoring Applications in Academic Evaluation for Web-Based Teacher Performance Assessment at SMA IT Imam Syafi'i was designed using bootstrap, html and MySql as databases. So this application can be run on multiplatform and is very possible to be developed in the future.
2. By using the Monitoring Application in Academic Evaluation for Web-Based Teacher Performance Assessment at SMA IT Imam Syafi'i it becomes faster and more effective

SUGGESTION

After designing a Monitoring Application in Academic Evaluation for Web-Based Teacher Performance Assessment at SDN 001, there are several suggestions that should be implemented for the further development of this system:

1. Applications that have been made are expected to be applied in the relevant agencies. 2. Create a system capable of storing teacher performance appraisal record data by using data replication on the client server.
2. Application design can be developed again with a more attractive user interface design.
3. Develop a system that is able to store monitoring data on teacher performance assessments in accordance with the assessment used at SMA IT Imam Syafi'i.

REFERENCES

Handayani, T., Taher, Y. S. B., Usman, A. H., & Ambarita, A. (2019). Aplikasi Pemeriksaan Biaya Instalasi Tegangan Listrik Rendah Berbasis Web Pada PT. PPILN Maluku Utara. IJIS-Indonesian Journal On Information System, 4(1).

Lela Komalasari, I. (2019). KOMPUTERISASI AKUNTANSI PENGGAJIAN KARYAWAN PADA PT. SUMMIT ADYAWINSA INDONESIA BERBASIS WEB. Jurnal Interkom, 13(4).

Arifin, N. Y., Kom, S., Kom, M., Tyas, S. S., Sulistiani, H., Kom, M., ... & Kom, M. (2021). Analisa Perancangan Sistem Informasi. Cendikia Mulia Mandiri.

Setyabudhi, A. L., Syofiawan, D., & Sulityo, E. A. (2021). Perancangan Sistem Informasi Kepegawaian Menggunakan Metode Fast Pada Badan Usaha Bandar Udara Hang Nadim Batam. Engineering And Technology International Journal, 3(02), 14-28.