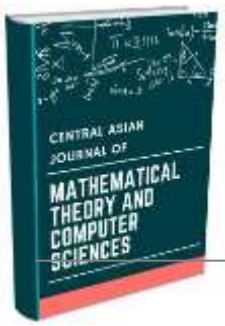

CENTRAL ASIAN JOURNAL OF MATHEMATICAL THEORY AND COMPUTER SCIENCES

https://cajmtcs.centralasianstudies.org

Volume: 04 Issue: 12 | Dec 2023 **ISSN: 2660-5309**

Implementation of Website Technology to Enhance Teacher Performance Evaluation

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Abstract

Improvement quality of student performance can be form study reports, this one of the school's programs aims to assess student abilities. Meanwhile, in this research students assessed the teacher's performance after finishing the learning process. The purpose of the research is to aid the teacher to see their teaching performance on the website. Therefore, it can help the school principal in seeing the quality teacher in State Junior High School 2 Sukodono. In this research, the author took a sample of 204 students as respondents. They are students of 7 grades in odd semester, academic year 2022/2023 in State Junior High School 2 Sukodono. Based on 204 respondents, they filled out the teacher survey with 23 questions. The research method used is a quantitative method. To collect data, the authors conducted observations, literature reviews and interviews at State Junior High School 2 Sukodono. To calculate the correlation between the answers of respondents and the handiness of Likert scale, namely eligibility test as the basis for the score for the assessment. Starting with a score of 1 which is considered "Poor" with indicators number 0 to 25, up to a score of 4 which is considered "Very Good" with indicators 76 to 100. 82.43% which includes very good.

ARTICLEINFO

Article history:
Received 5 Oct 2023
Revised form 26 Nov 2023
Accepted 31 Dec 2023

Keywords: *Assessment System, Teacher Performance, and Website.*

I. INTRODUCTION

Education is an interaction formed by teacher and student to attain the educational goals, which occur in the learning process. Students will be the determining factor so they can influence everything needed to achieve their learning intent (Suwardi & Farnisa, 2018). Furthermore, teachers also receive student's feedback regarding the learning process. So, it is possible to develop the atmosphere of critical thinking, collaboration and creativity in accordance with characters needed (Hoesny & Darmayanti, 2021).

The attitude of teacher and student as well as their behavior related to the classroom condition. This condition is determined by interaction between teacher and student in the classroom. The interaction between these three components involves facilities and infrastructure such as methods, media and supervision of the learning environment so that achieved the goal. Therefore, competencies possessed by teachers are considered predominant in order to create effective learning, particularly professional competencies (Nur'aini & Ruslau, 2023). The divergent student needs must be fulfilled in the classroom, demands for innovation and reform are also increasing. Meanwhile, teacher's responsibilities are also increasingly varied starting from spare time to consult with parents and communicating with colleagues for teaching development Hoesny & Darmayanti, 2021).

Perception is a process in which individuals are expected to organize and interpret their sensory impressions in order to give meaning to the environment. If the students have a good perception of the teacher so that the student will be able to join the lesson earnestly. In addition, it would be possible to obtain upstanding learning outcomes (Nurdin, Purwosusanto, & Djuhartono, 2021). In order to carry on teacher quality, it is needed to have an assessment system for teachers that is sustainable and has positive implications. Nowadays, assessment system of teacher performance actually has existed every year with the term PKG (Teacher Performance Assessment), which aims to identify the ability of teachers in carrying out duties through measuring the understanding of demonstrated competencies and employee performance target (Wahyuni, Ariyasanti, & Mashudi, 2022).

Many teachers have met the educational qualification however there are still teachers who have not fulfilled the qualification in terms of personal qualities (Mansir, Yogyakarta, Guru & Nasional, 2020). The importance of teachers' qualifications in encouraging improvements in the quality of education must be accompanied by the competence of the teacher as a main actor in the teaching and learning process. To fulfill this requirement, teachers should meet all the basic teacher's competencies namely pedagogical competence, personality competence, social competence and professional competence (Hafsah M. Nur & Nurul Fatonah, 2023).

The school principal is one of the educational components that has influence on improving teacher performance. They are responsible for organizing activities, school administration, developing educational staff and utilizing and maintaining facilities and infrastructure (Romadhon & MS, 2021). Therefore, the principals duties involve educational activities and development teaching staff as well as the utilization of educators. Website media is used to monitor and assess the quality of teachers in the class with an assessment system for teacher performance. Website is a kind of electronic publications media. This media has two types namely websites that the content can not be easily changed by users and on the contrary. In this research, using a static website, to change the content by applying coding on a website page or changing it through a database (Ronaldo & Pasha, 2021).

However, in this research, the teacher performance assessments were carried out directly by students through a web, this website-based teacher performance assessment system applied in State Junior High School 2 Sukodono. This kind of assessment is beneficial, namely to see the quality of teachers during the learning process in the classroom by students' perceptions. Therefore, every student will be given user access to assess every teacher who gives lessons in the classroom, starting from the utilization of media learning, teacher's attention to students and transferring material lessons to the students at the class.

The design and development of website systems for teacher performance assessment are expected to be the way to elevate the quality of teachers in teaching and learning process in the classroom through students' perception in State Junior High School 2 Sukodono, so that it becomes easier to be monitored. Based on the description above, the author proposes a website-based teacher performance assessment system to know the teacher's performance while teaching in the class, each teacher would not know the assessment from the

students. This assessment system also helps the school principal to evaluate the teacher in school through a website where the assessment report has been recorded by the administrator and submitted to the curriculum.

II. METHOD

To obtain the information needed in this research, the author used several methods to create the design. This research was conducted during the odd semester at State Junior High School 2 Sukodono, as for the methods used as following:

a. Observation. A technique for collecting data by making direct observations of the subject to be researched in order to get the valid information. The data obtained in this observation consisted of the name of the teacher, the subject of teaching, name of students and class grade, the presence of the teacher in the class as well as the character of the teacher in the learning process.
b. Interview. To obtain the relevant data, the author conducted a direct interview with applicable people in this research, the students of State Junior High School 2 Sukodono, to find out the condition of the class when learning activities, this became information materials for creating a website-based assessment system for teacher performance.

The design of the application system explains the sequential flow in creating the application. The design is made to make it easier to determine the style, interface of flow of application (Aditya Fajar Ramadhan, Ade Dwi Putra, & Ade Surahman, 2021). This sequence is depicted in the following diagram:

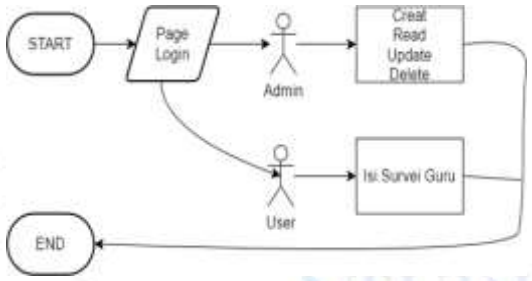

Fig 1. Application system design flow diagram

The figure 1 above explains that the application system design flows after collecting data by starting with registration on the login page. After that, Person is registered as administrator. Therefore, there are optional questions including create, read, update and delete question items which will be displayed on the teacher survey page. If determined as the user, someone can immediately fill out the teacher survey that has been provided by the administrator.

In designing a flowchart, there is actually no absolute formula or benchmark due to the flowchart itself is a description of thoughts in analyzing several results that vary from one to another (Akbar & Astutik, 2021). The use of flowchart is needed to clarify the flow of a system. An overview of the application usage flowchart can be seen in figures 2 and 3.

Fig 2. Administrative flowchart

The figure 2 explains the flow of using the website for the administrator, starting from logging in as admin or user, then if it is successfully logged in as administrator, will be directed to the homepage of the teacher survey dashboard and see the result of the teacher survey analysis. Therefore, it is able to add and delete students as well as see which students are still not registered. On the settings page, there is a menu to add classes, teachers, teacher surveys and delete classes, teachers and questions in the teacher survey. Finally, there is also a system administrator menu for adding, removing and viewing the list of administrators.

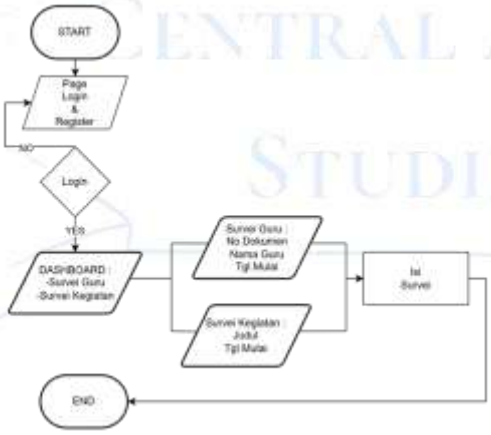

Fig 3: User flow

Figure 3 explains the flow of the website for the user, starting from logging in, then the user fills out the teacher survey that has been submitted or provided by the administrator. After filling out the survey, the result will be displayed on the dashboard page. In addition, if the administrator prepares an activity, the user just needs to fill in the survey.

III. RESULTS AND DISCUSSION

To find out the student's assessment of teacher performance, the author used a website for students to assess the teachers. In the form of a website that can be accessed via mobile phone with a local network by using proxy devices and wireless access points. Data were analyzed using a Likert scale. This is shown by the percentage of teacher surveys that have been filled out via e-survey on the website of State Junior High School 2 Sukodono from 204 respondents who were students of 7 grade with a group size of 6 classes. It can be seen in table 1 below:

Table 1. Number of class and student

No.	Class	Number of student
1	VII C	34
2	VII D	36
3	VII E	36
4	VII F	36
5	VII G	32
6	VII H	30
Total		204

The eligibility testing uses a questionnaire method with questions related to application appearance, functional application and application utilization (Bagus Sasmita, Taurusta, & Eviyanti, 2023). Starting from score 1 assumed as “poor” until score “4” claimed as “very good”. The following are appropriateness category use a Likert scale:

Table 2. Appropriateness category

Score	Indicator	Notes
1	0 <= 25	Poor
2	26 <= 50	Fair
3	51 <= 75	Good
4	76 - 100	Very good

There are 3 indicators used in filling out the teacher survey on the website, namely use of educational media, teacher attention to students during class, delivery materials which is divided into 23 questions. According to the table of teacher survey results, on average the students assess the teacher's performance in the class very well. Details of the question items can be seen in the table 3 as follows:

Table 3. Questions item

No.	Question
1	Teacher use educational media in teaching
2	Teacher use various educational media
3	Every teacher uses educational media except book
4	Teacher use inappropriate educational media with subject of lesson
5	I more understand the subject of lesson if the teacher uses educational media
6	I feel bored if the learning process without using educational media
7	The using of educational media gives big influence of student’s understanding
8	I feel excited joining the learning that using educational media
9	Teacher only use educational media while teaching in learning process
10	Teacher use educational media while at practice
11	Teacher involve the student in using of educational media
12	I feel more diligent due to educational media making me interest with the lesson
13	The using of educational media makes me no more afraid on lesson
14	I do not feel the benefit of educational media
15	In teaching, teacher teach student by more reading and do not give chance to ask
16	Teacher teach the lesson material in accordance with instances
17	Every question of students has been explained by the teachers in order the students understand
18	Teacher warn the student who do not pay attention to the learning process
19	I feel saturated due to the learning method is not attractive
20	Teacher deliver the lesson material with clearly voice
21	Teacher approach the students who get in difficult of understanding the lesson
22	Teacher’s attention appeal to all students
23	Teacher gives compliment when the student answers the question correctly

Based on 204 respondents who filled out the teacher survey with 23 questions, a calculation was carried out to obtain the eligibility percentage. The maximum score is symbolized by the letter X with a score of 4 that is a very good category. This score is multiplied by the total question given, namely X=4x23=92. Therefore, expectation score is symbolized with letter Y with using number of respondents, can be written with Y=92x204=18768, then the respondent's assessment formula is obtained as follows:

f = Tn x Pn
f = Score of frequency total on every question
Tn = Number of respondent
Pn = Score optional of Likert Scale

Therefore, to obtain the result of eligibility percentage score, it can be formulated using score total frequency on every question and expectation score as following the formulation:

fP = (Y x 100%)
P = eligibility percentage
Y = expectation score

So, the calculation on the eligibility percentage as follows:

f = (2528 x 4) + (1181 x 3) + (836 x 2) + (145 x 1)
f = 10.112 + 3.543 + 1.672 + 145 = 15.472
P = (15.472/18.768 x 100%)
eligibility percentage = 82,43%

Total score of frequency obtained for every question is 15.472 with eligibility percentage is 82,43%. Based on the percentage it can be assumed that the teacher of the lesson met a very good category. According to the data obtained, the author does and plans a system concept that is used in the final research. Planning and system design were built to create a software system that can be applied in State Junior High School 2 Sukodono. The device system is website-based, so it can be accessed via handphone, laptop, tablet, etc. Implementation system with the displaying number of respondents, score, max score, value and quality that have been done by students through filling out the teacher survey can be seen in this figure 4 as follow:

Fig 4. Display of the teacher survey result

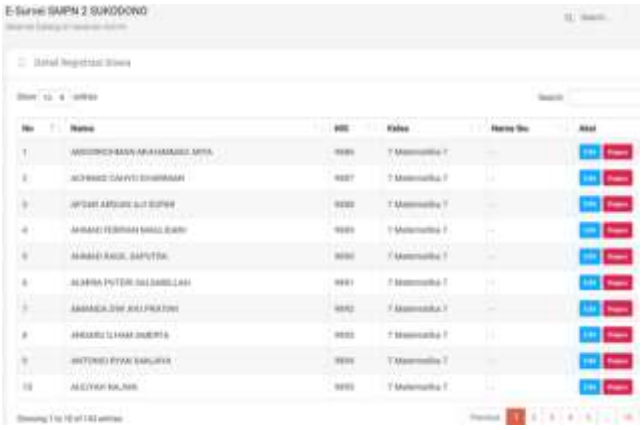

Fig 5. Display of student user

Figure 5 displays the student user list menu which contains the content of name of student, student number, class and mother's name. Administrators can input the students, edit and delete students. The website display attached above has tested the system using black box testing system. The purpose of the testing at this system is to avoid the error system when the application is used by the user. Black box testing is software

quality testing that focuses on the functionality of software. The black box testing aims to find incorrect functions, interface errors, data structure error, performance error, initialization and termination errors (Wijaya & Astuti, 2021).

Black box testing is carried out to test an application with several experiments so that it can show applications can run maximally as expected. Inputting data into the system, the testing process uses Boundary Value Analysis, namely calculating test experiment data until documentation of test result (Ismai, 2018). A testing flow is needed so that testing can run regularly.

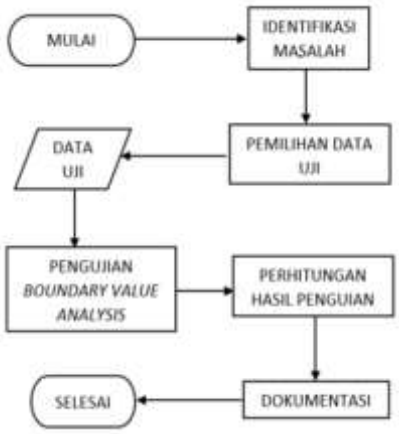

Fig 6. Testing flow

Starting from the initial step on the testing which determines the method and technique that is used. This testing uses the testing method of black box with Boundary Value Analysis. Second stage, identifying the problem. Next step is choosing the test data. Data were applied, namely a list of classes which related to the existing problem. The fourth and fifth step are preparing data for testing by using black box testing with Boundary Value Analysis, so that producing a conclusion toward the existing problem. The sixth and seventh steps are calculating the result test according to percentage of testing then doing documentation for reporting the test.

Application of assessment systems to the website-based teacher performance involve several functions and modulus namely monitoring, students, settings, administrator system etc. However, this test takes one of the functions that is “add class” it is assessed by representing other functions on this website.

Fig 7. The Display of Class

The form above has some fields that must be filled in order the class list can be displayed and assessed regarding the teacher performance that is choosing class, subject of lesson, and class as well as clicking the submit button to save data on the add class. Submit button aims for saving the data in the database. To do testing in every field on the form above, some testing scenarios have been prepared in order to maintain several inputs from the user. According to Boundary Value Analysis (BVA), the test result can be seen on the table 4 as follow:

Table 4. Test result of Black Box

No	Field tested	Form of testing	The result expected	Conclusion
1	Class	Choosing class of 7, 8 or 9	a. Class displayed and selected b. No error notifications	Success
2	Subject	Choosing subject	a. Subject displayed and selected b. No error notifications	Success
3	Class taken by the teacher	Choosing class of 7, 8 or 9	a. Class displayed and selected b. No error notifications	Success
4	Submit	To save the adding class data	a. Submitted dan displayed on the list of class b. No error notifications	Success
5	Delete	To delete the class data has been submitted	a. Can be deleted from the list of class b. No error notifications	Success

IV. Conclusion

This research concludes that the use of website-based teacher performance assessment in State Junior High School 2 Sukodono in order to build activeness the students regarding to assess the teacher after finishing the learning process at the classroom is quite enough. These findings are expected to be used as consideration for the teachers and policy makers to maintain the quality of learning and must be continuously improved. Furthermore, further research is needed to reveal other things regarding teacher performance in the learning process. The further research can strengthen and enrich the findings of this research

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