

Training on Using the Study Group Classification Application Results of the Tahfidz Program Entrance Test in the Al-Mawaddah Area of the Nurul Jadid Islamic Boarding School

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Abstract—The Tahfidz program in the Al-Mawaddah area of the Nurul Jadid Islamic Boarding School has succeeded in producing hafidzah who are able to memorize the Al-Quran well. The success of this program depends not only on the enthusiasm of the students, but also on the effectiveness of the study groups. The process of forming study groups, which is currently done manually through analysis of entrance test results, has limited time and accuracy. As a solution, a Study Group Classification Application for the Tahfidz Program Entrance Test Results was developed using the Streamlit Web-based C4.5 Algorithm. However, there needs to be training for Tahfidz Program administrators in using this application. This Community Service (PKM) aims to provide training on using this application. This training is expected to increase the efficiency of the process of recapping student grouping test results. Thus, this application can make a positive contribution to the quality of tahfidz learning in the Al-Mawaddah Region. The application of this technology is not only as a tool, but also as an innovation to improve the quality of education in Islamic boarding schools. This PKM can also be an example for other Islamic boarding schools with similar tahfidz programs. The implementation phase involves preparation, implementation, and evaluation. This PKM shows that application users give positive value to the application features. This system makes it easier for Tahfidz Program administrators to summarize entrance test results and make decisions. Evaluation shows the average positive value of users regarding various aspects of the application. The training activities went well, providing new knowledge and skills to the Tahfidz Program administrators. Future suggestions are to develop and add features to this application to provide greater benefits.

Keywords— C4.5 algorithm; Study groups; Tahfidz Program.

1 Introduction

Nurul Jadid Islamic Boarding School is an Islamic boarding school located in Probolinggo Regency, precisely in Karanganyar Paiton Village. Nurul Jadid Islamic Boarding School has several areas for students to domicile, one of which is the Al-Mawaddah area which is located to the south of the boarding school, usually called “Dhalem Selatan”. The Al-Mawaddah area is different from areas in general. This Islamic boarding school area not only studies religious knowledge, but also general knowledge because it is combined with school or formal education[1], [2]. In this region there are 6 superior programs, namely the Quran Translation Training Program (PPTQ), Intensive Book Study Program (PIKK), Smart Club Program (SC), Foreign Language Development Program (PPBA), I'dadiyah Program and one of them is the Tahfidz Quran program[3].

The Tahfidz program in the Al-Mawaddah area of the Nurul Jadid Islamic Boarding School is a positive initiative to produce hafidzah who are able to memorize the Al-Quran well. The success of

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this program, however, lies not only in the enthusiasm and commitment of the students, but also in the effectiveness of the study groups formed. The formation of optimal study groups plays an important role in achieving tahfidz goals. In this context, the process of forming study groups at the Nurul Jadid Islamic Boarding School is still mostly done manually through analysis of entrance test results, which include various criteria such as Number of Memories, Munjiyat, Tajwid, Nadzom Hidayatus Sibyan, Memorization Speed, and Juz Amma. This manual method, although it has worked quite well, has limitations in terms of time and accuracy.

In response to these limitations, a Study Group Classification Application for the Tahfidz Program Entrance Test Results has been designed using the C4.5 Algorithm[4]–[6]. Web-based Streamlit to overcome ongoing problems, but the application that has been built requires training for Tahfidz Program administrators in terms of its use. Therefore, this Community Service (PKM) aims to provide training on how to use the study group classification application for the entrance test results for the Tahfidz program that has been created.

With this training, it is hoped that the student grouping process can become faster, more effective and accurate. So, apart from increasing time efficiency, this application can also make a positive contribution to the quality of tahfidz learning in the Al-Mawaddah Region. The use of technology in this case is not only as a tool, but also as an innovative solution to improve the quality of education and learning in the Islamic boarding school environment[3], [7], [8]. Apart from that, this PKM can be an example of the application of technology in managing learning in other Islamic boarding schools that have similar tahfidz programs.

2 Method

There are 3 stages in implementing training and assistance in using the study group classification application for the streamlit web-based entrance test results for the Tahfidz program [9], [10], namely, 1) Preparation, 2) Implementation and 3) Evaluation. An overview of the process of these 3 stages can be seen in the following chart:



Figure 1. Stages of Implementation of Community Service

- a. Preparation Stage
The preparation stage is carried out by holding discussions or preparatory meetings first with the Tahfidz Program Management in the Al-Mawaddah Region and the PKM team and determining the training implementation schedule. After the preparatory meeting is held, the next step is to prepare materials and videos for using the study group classification application for the Tahfidz program entrance test results.
- b. Implementation Stage
Implementation of training on the use of the study group classification application for the Tahfidz program entrance test results is only carried out for Tahfidz Program Administrators in the Al-Mawaddah Region with presentations and distribution of materials and videos on how to use the application. Implementation is carried out in accordance with the activity implementation schedule that has been agreed with the Tahfidz Program Management in the Al-Mawaddah Region and the PKM team
- c. Evaluation Stage
The evaluation stage was carried out to determine the understanding of the Tahfidz Program Management in the Al-Mawaddah Region regarding the use of the study group classification

application for the Tahfidz program entrance test results after the training was carried out.

This evaluation stage is also used as a benchmark for the success of implementing this PKM. Partners for implementing this service are only intended for the Tahfidz Program Management in the Al-Mawaddah Region. In its implementation, it is hoped that the residents of the Tahfidz Program Management will have high enthusiasm for the success of the training in using the study group classification application for the results of the Tahfidz program entrance test.

3 Findings And Discussion

3.1 Finding and Discussion

Training and mentoring for Tahfidz Program Administrators is carried out using Laptops/PCs by providing direct application usage training to all Tahfidz Program Administrators. Apart from that, the PKM team also provides training materials and videos on the use of previously created applications to make the training process easier. Overall, there are 3 stages in the community service process that have been carried out, which include:

a. Preparation Stage

In this process, discussions were held with the Tahfidz Program Management and the PKM team in determining the schedule for implementing training and mentoring. Based on the results of the discussions that have been carried out, in the training process the PKM team is asked to prepare materials and videos on the use of the application that will be used during training and assistance in using the study group classification application for the results of the Tahfidz program entrance test.

b. Implementation Stage

Training for Tahfidz Program Management is carried out face to face with the PKM Team. Based on the results of the training and mentoring that has been carried out, there are several inputs to the applications that have been built, including:

- There is a need for master data for students who will take the selection test.
- There needs to be a home display containing information on test results that have been carried out and assessed
- There is a need for an import training data menu which will be used as a model for the C4.5 algorithm, so that administrators can add more data for training data to increase the accuracy results of the C4.5 algorithm.

The presentation documentation for administrators is as shown in the image below:



Figure 2. Training on study group classification application results from the Tahfidz program entrance test for Tahfidz program administrators

Apart from that, training for Tahfidz Program Administrators is also carried out by providing video tutorials on using the application that has been created by the PKM team. This training lasted for approximately 1 month, after which the PKM team distributed a questionnaire to determine the level of understanding of the Tahfidz Program Management regarding the use of the application that had been built.

c. Evaluation Stage

This process was carried out to determine the level of understanding of the tahfidz program administrators after participating in training in using the application that had been built. Evaluation is carried out by giving a questionnaire to the tahfidz program administrators. The questionnaires distributed were grouped into 5 aspects, namely interface, experience, functional, usable and user friendly aspects of the application. The results of the questionnaire that has been distributed can be seen in the table below:

Table 1. Management satisfaction with the applications that have been built

Pertanyaan	Sangat Baik	Baik	Cukup	Butuh Perbaikan
User Interface	7 (41%)	6 (35%)	4 (10%)	0 (0%)
User Experience	9 (53%)	5 (29%)	2 (4%)	1 (6%)
User Friendly	9 (53%)	4 (24%)	3 (4%)	1 (6%)
Functional	8 (47%)	5 (29%)	2 (2%)	2 (12%)
Usable	7 (41%)	7 (41%)	3 (4%)	0 (0%)

Based on the table above, overall the application that has been developed is considered good with an average of 47% of respondents stating it is Very Good from all aspects.

4 Conclusion

Based on the discussion explained above, several conclusions can be drawn in this service, namely:

- The system that has been built (application for classifying study groups for the Tahfidz program entrance test results) is able to overcome the problem of classifying the results of the Tahfidz program entrance test grouping which has often been the subject of internal discussion within the Tahfidz Program Management in the Al-Mawaddah Region of the Nurul Jadid Islamic Boarding School.
- There are several inputs to the system that has been created in terms of the features that have been created.
- This system was developed with the aim of making it easier for the Tahfidz Program Administrators in the process of recapping the results of the Tahfidz program entrance test and to speed up the decision-making process for the entrance test results.
- Based on the results of tests that have been carried out, the average application user states that it is very good regarding 5 aspects, namely interface, experience, functional, usable and user-friendly aspects with an average score of 47%.

Training activities on the use of study group classification applications for entrance test results for the Tahfidz program in the Al-Mawaddah area of the Nurul Jadid Islamic Boarding School have been carried out well and smoothly. Preparation, training and evaluation methods are the three most effective stages in solving problems in the Al-Mawaddah area of the Nurul Jadid Islamic Boarding School. The benefit of the activities that have been carried out is to provide new knowledge and skills to the Tahfidz program administrators in using the study group classification application for the Tahfidz program entrance test results. Further service activities are recommended for developing existing applications as well as adding several features that cannot be fulfilled in the implementation of this service so that they can provide more or the same benefits.

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