

## **ABSTRACT**

### **OPTIMIZATION OF E-LEARNING SYSTEM PERFORMANCE THROUGH BACK-END IMPLEMENTATION AT MI YA BAKII KARANGJENGKOL SCHOOL**

By  
*Rosalina Alda*  
20104066

*Education in Indonesia faces challenges on both macro and micro levels. Micro-level challenges in Indonesian education include monotonous teaching methods, inadequate facilities, and low student achievement. One formal institution facing micro-level challenges is MI Ya Bakii Karangjengkol due to its inadequate teaching methods and facilities, which lead to difficulties in data processing and learning performance. According to a survey, 80% of teachers still experience difficulties in teaching performance without e-learning support media. Teachers face limitations in developing teaching skills, as well as constraints in conventional learning that hinder data processing. The proposed solution is the development of an e-learning system using the Scrum methodology with an application programming interface (API) design that facilitates integration. API testing results show performance as expected. With the implementation of the e-learning system, data processing and learning performance at MI Ya Bakii Karangjengkol have improved. Teachers can easily manage data, reduce the risk of errors in recording grades, and enhance accessibility in digital data management. Learning performance has also improved as teachers can implement various teaching methods and students can access materials and receive feedback quickly. Thus, this solution addresses the difficulties faced by MI Ya Bakii Karangjengkol in data processing and learning performance.*

**Keywords:** *API, Education, E-learning, Scrum, Websit*