

KOMPUTIKA

July 2025
Issue

NEWSLETTER

Social Innovations In Education By UM

OUTSIDE

—

TAG

[English Literacy] [Rural
Classroom] [FCSIT]
[Automated Essay Scoring]

—

AFFILIATION

Department of Computer
Systems and Technology,
Faculty of Computer
Science and Information
Technology, UM



Automated Essay Scoring System in a Classroom

EDITED BY

Raja Jamilah Raja Yusof

—

Write Smart: The Future of English Assessment

— By Mohd Yamani Idna Idris and Kheeshyenraaj

A Collaborative Grant to Empower Orang Asli Education

This project marks a unique collaboration between the Faculty of Education and the Faculty of Computer Science at Universiti Malaya, working closely with teachers at SK Sungai Sampo, a rural primary school serving the Orang Asli community in Negeri Sembilan. At the heart of the project is a simple yet powerful idea: to ease the burden of English writing assessment for teachers through technology, while enhancing students' learning experiences. By introducing an intelligent Automated Essay Scoring (AES) tool tailored to the local classroom, we hope to close literacy gaps and open new doors of opportunity for underserved learners.



Site Visit to SK Sg Sampo

The Promise of AES: A Teacher's Quiet Ally

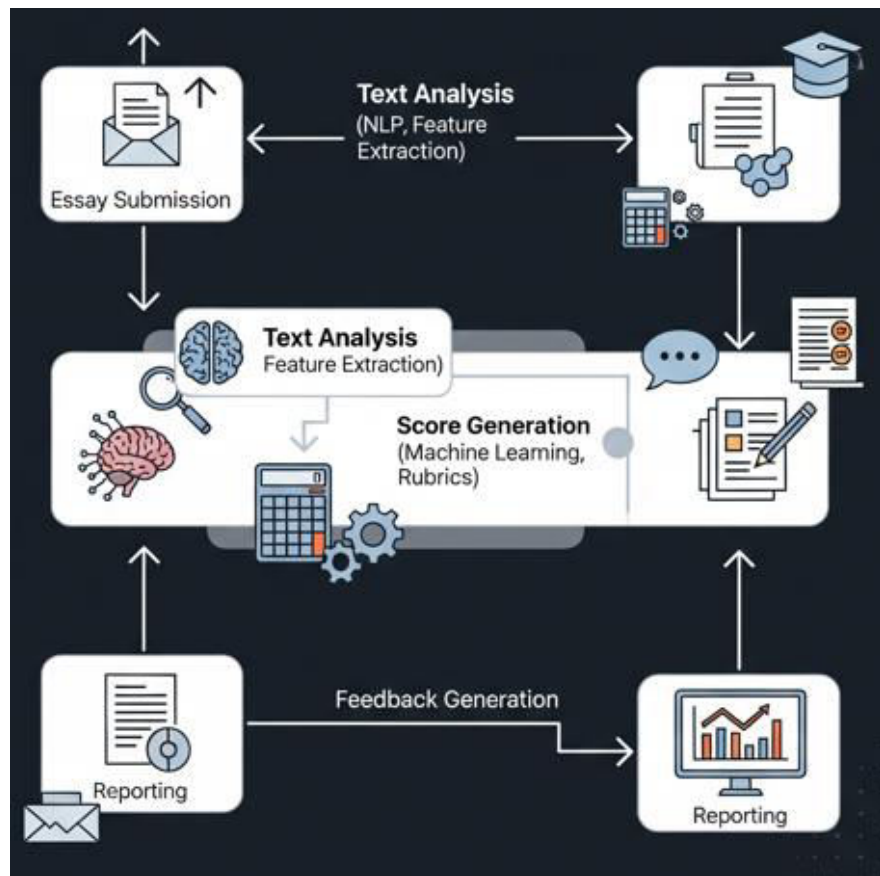
Automated Essay Scoring tools have gained global traction as time-saving, scalable alternatives to manual marking. But their potential goes beyond convenience. A well-designed AES system can offer real-time feedback, reduce marking inconsistencies, and allow teachers to focus on personalized interventions rather than repetitive corrections. In rural and under-resourced schools, this makes a world of difference especially when teachers juggle multiple roles and student needs.

Behind the Tech: How the System Works

At the heart of this project is a fully integrated Automated Essay Scoring (AES) system designed to simplify English writing assessment and enhance student learning. It all starts with a simple action: students either upload their essay document or type it directly into the system. If the essay is submitted as an image, a visual AI component steps in using a handwriting recognition model to accurately convert handwritten text into digital format.

Once digitized, the essay is evaluated using a hybrid machine learning system that combines content-aware algorithms and rubric-based scoring models. Each essay is scored both holistically and across specific traits such as grammar, coherence, vocabulary use, and relevance. Finally, a language generation module (powered by GPT-like technology) generates personalized, plain-English feedback telling students not just what their score is, but *why*, and *how* they can improve.

The entire system is designed to be teacher-friendly, student-sensitive, and usable even in low-bandwidth school environments.



Automated Essay Scoring System Flow

Building with Purpose: Why Orang Asli Communities Matter

While the AES tool is designed to eventually support schools nationwide, our pilot begins with a focus on Orang Asli learners in Negeri Sembilan, students who are often left behind not because of ability, but because of barriers. Language gaps, limited resources, and deep-rooted marginalization have made English literacy an uphill battle in these communities. Many students hesitate to continue their studies, convinced that poor writing skills mean they're not "good enough."

This project hopes to change that narrative. By working alongside local teachers and embedding cultural and contextual relevance into the system, we're building more than an AI model which can also help build self-belief. The goal isn't just to assess writing. It's to help students see that they *can* write, and that their voices matter.

What's Next: From Prototype to Policy

A prototype of the AES tool is currently under development and will be tested in selected classrooms. These trials will gather teacher feedback and classroom observations to guide improvements from refining the scoring model to enhancing the feedback interface. Comparative evaluations will also be conducted to benchmark the tool against conventional grading methods, ensuring it is not only innovative but also reliable.

If successful, the project will scale beyond Negeri Sembilan bringing the AES tool to more rural and under-resourced schools across Malaysia. Backed by Universiti Malaya's Global Transformation Research Grant, we aim to spark a broader conversation around technology-enabled assessment: not as a teacher replacement, but as a meaningful support system.

We're not just launching a tool, we're laying the foundation for a long-term shift in how English literacy is supported, assessed, and celebrated in our schools.

The screenshot displays a user interface for an essay assessment tool. At the top, there are navigation links for 'Dashboard', 'My Essays', and 'Settings'. The main content area is titled 'The Importance of Education' and shows an essay text with various corrections and suggestions. On the right, a 'Score' of 85/100 is displayed. Below the score, there are sections for 'Grammar & Mechanics', 'Content & Coherence', and 'Style & Tone', each providing specific feedback. A 'Suggestions for Improvement' section is also present, suggesting to expand on the socio-economic impact mentioned in paragraph 3. The interface includes a 'Save Draft' button and a 'Submit' button.

Sample User Interface of the System

For more information, contact the author at yamani@um.edu.my from the Department of Computer System and Technology at Universiti Malaya.