

# ABSTRACT BOOK

## 2<sup>nd</sup> INTERNATIONAL CONFERENCE ON **ARTIFICIAL INTELLIGENCE** **AIMEC** **IN MEDICAL EDUCATION** **2025**

"Transforming Medical Education in the Age of Artificial Intelligence"

**12<sup>th</sup> - 14<sup>th</sup> DECEMBER 2025**

Preclinical Building, Faculty of Medicine,  
Universiti Kebangsaan Malaysia (UKM), Jalan Yaacob Latif, Bandar Tun Razak,  
56000 Cheras, Kuala Lumpur, Malaysia.

**#AIMEC2025**

ePOSTER PRESENTATION – P109

## PBLGradeFlow: A Cost-Effective Digital Solution for Streamlining Problem-Based Learning Assessment Management in Medical Education

WAN MUHAMAD SALAHUDIN WAN SALLEH, NOUR EL HUDA ABD RAHIM

*Department of Basic Medical Sciences, Kulliyyah of Medicine, International Islamic University Malaysia,  
25200 Kuantan Pahang Malaysia*

*drsolah@iium.edu.my*

### ABSTRACT

**Introduction:** Problem-based learning (PBL) assessment in medical education typically depends on manual mark calculations, which leads to errors, delays in feedback, and extra administrative work. Tracking attendance, mark submissions, and managing facilitators separately creates major challenges for PBL coordinators who manage multiple student groups across different academic years.

**Objective:** To develop a cost-effective digital system using the free Microsoft 365 Education license that automates PBL assessment tasks, ensures accurate real-time data, and improves administrative efficiency without needing to purchase additional software.

**Methodology:** PBLGradeFlow was built using Microsoft Power Apps and SharePoint Lists, which are freely available through university education licenses. The system manages 25 PBL groups with approximately 285 students across Year 1 and Year 2 at the Department of Basic Medical Sciences, Kulliyyah of Medicine, International Islamic University Malaysia. It combines automated mark submission and calculation, attendance checking, facilitator management, and real-time dashboards. Important features include different access levels for lecturers and coordinators, tracking of all changes through SharePoint's version history, and Excel dashboard integration for complete monitoring.

**Results and Discussion:** PBLGradeFlow removed the need for manual mark submission and eliminated calculation errors. It allows instant mark processing for all PBL sessions. The coordinator dashboard shows missing and incomplete submissions in real-time, allowing quick action before semester exams. Lecturers can edit their own entries while coordinators have full control with complete records of all changes. The system uses the free Microsoft 365 tools already available at the institution, proving that digital transformation can be achieved without additional costs.

**Conclusion:** PBLGradeFlow shows how free Microsoft 365 Education tools can successfully transform PBL assessment management. It offers a practical, low-cost model for institutions that want to reduce administrative work while improving the accuracy and speed of delivering continuous assessments in medical education.

**Keywords:** Assessment automation; medical education; Microsoft Power Apps; Microsoft 365 education; problem-based learning