



Faculty of Education & Centre for Teaching, Learning and Programme Development Student Academic Success Model

Introduction:

The Faculty of Education, in collaboration with the Centre for Teaching, Learning and Programme Development (CTLPD), will develop a student success model integrating an early warning system. The document will briefly describe the model, objectives, and project activities.

Model Description:

The model will serve as an early warning system predicting the likelihood of students passing all their registered modules each semester. The primary goal is to identify students at risk of academic underperformance as early as possible. In addition, the model will explain the main contributing factors and quantify how much each factor influences the prediction, using interpretable artificial intelligence (AI) techniques. This will enable targeted, timely, and transparent support interventions.

Objectives:

The project is based on three main objectives:

Use the existing students already identified as at-risk by the faculty.

- Determine the most common risk indicators in the current Education student population.
- Identify which predictive variables are most actionable and responsive to interventions
- Explore automation and integration opportunities to streamline the identification and tracking process (e.g., real-time dashboards or alerts).

Development of Student Success Prediction Model

- Develop a functional and interpretable student success prediction model tailored to the Faculty of Education.
- Identify at-risk students earlier and more accurately.
- Present targeted and effective academic support interventions.
- Develop a framework for future scaling and integration across additional faculties.

Student Attendance Tracking

- Identify at least 2-5 modules with high at-risk student identification rates to use the class attendance portal to capture student attendance.

Project Activities:

Responsible	Topic	Activities	Data Period	Due Date
Faculty	Student and Module Data	• Intelliboard or Moodle data • At-risk Questionnaire data • Student Assessment Results in any other source. • Assessment types and weighting for different modules.	2023 to date	8 August
Faculty	Access rights	• MS forms/any data collection tool		8 August
CTLPD	Student data	• Student Assessment Results (ITS only) • Student Academic Support services data (AA, TUT, AW, etc.). • Psychosocial Student Support Data (e.g., residence, health and wellness, etc)*	2023 to date	8 August
CTLPD	Model	• Development, testing, pilot and deployment.		30 August
Faculty	Attendance Register	• Identify 2-3 modules • Collect session attendance data		01 Sept-onwards
CTLPD	Model	• Implementation and monitoring		01 Sept-onwards

Success Metrics

To evaluate the impact of the model, the following success metrics will be monitored

- Increased number of early identification of students at risk.
- Increased number of students participating in proactive interventions.
- Increased number of students using student support services.
- Reduction in at-risk student dropout rates.
- Increased pass rate.