

From Insight to Impact: Enhancing Student Progression through Data Analytics

Overview of Initiative

The 'Academic Success' dashboards, developed using Power BI, provide a data-driven framework for monitoring student progression and retention across Dublin City University (DCU). Initiated and continuously refined over several years by the Quality and Institutional Insights Office (QIO), the project has been guided by strategic input from senior university leadership, particularly DCU's Education Committee.

The dashboards currently span three core areas: exam results analysis, student progression trends, and CAO entry requirements linked to first-year outcomes. Designed for ease of use, they support decision-making by Programme Chairs, Heads of School, and senior university leaders.

By consolidating complex datasets from the Student Record System into an intuitive interface, the dashboards enable granular filtering by faculty, school, programme, study mode, demographic profile, and entry route. This empowers users to identify potential issues and areas for further exploration, such as pass rates, cohort-based performance, external benchmarking of final grades by ISCED code, and correlations between Leaving Certificate results and university performance.

Looking ahead, the recent rollout of DCU's new Student Information System is expected to further enhance the dashboards' functionality, enabling deeper insights and more responsive academic interventions.

Monitoring & Oversight

The management and operational delivery of the Academic Success dashboards are overseen by the QIO, which leads the development and maintenance of the Power BI reporting suite. Progress and updates on the initiative are formally reported to DCU's Education Committee on an annual basis.

While no formal mechanism currently exists to evaluate the dashboards' effectiveness, the initiative follows an iterative development model. Dashboards are reviewed and refined after each exam period, ensuring continuous improvement. Regular stakeholder feedback—from Programme Chairs, Faculty Deans, Heads of School, and members of the Education Committee—plays a key role in shaping enhancements and ensuring the dashboards remain responsive to institutional needs.

This agile approach allows the university to adapt quickly to emerging trends and challenges in student progression, while maintaining alignment with strategic priorities.

Key Features

- Data Analytics & Dashboards
- Institution-wide initiative
- All students

Aims & Objectives

Aim: To deliver actionable business intelligence that informs strategic and operational decision-making at university-wide and local levels—including school, discipline, and programme—supporting student cohorts and tracking academic success across multiple years.

Objective 1: To analyse and visualise annual aggregate exam results, enabling the identification of academic areas that may benefit from deeper investigation, targeted interventions, or enhanced student support mechanisms.

Objective 2: To examine student progression at the programme level by cohort, incorporating first-year performance data alongside CAO entry profiles. This facilitates a more nuanced understanding of the student academic journey and helps pinpoint cohorts that may require additional academic or pastoral support.

Data & Evidence of Impact

Dashboards are routinely used across various committees and boards, with periodic updates implemented to address emerging data needs and enable more in-depth analysis based on end-user feedback. They have also been widely adopted across programmes, schools, and a range of services and support units within the university.

One example comes from a recent analysis of academic performance, which highlighted a widening achievement gap between access students and their peers during the later years of undergraduate study. This disparity may be linked to the concentration of institutional resources in Years 1 and 2, which appears to moderate differences in precision marks, pass rates, and retention during the early stages.

In response to these findings, targeted discussions have been initiated to explore the reallocation of resources—specifically aimed at strengthening support for widening participation students as they progress into the latter stages of their academic journey. To assess the impact of these adjustments, academic performance will continue to be monitored over the coming years via published dashboards, providing valuable insights into the effectiveness of resource distribution across all years of study.

