

Designing Transnational STEM Education: A Case Study of the MSc Financial Technology with Data Science Across a UK-India Branch Campus



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EDULEARN-26: 18th International Conference on Education and Learning Technologies, June 2026, Palma de Mallorca

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Why Transnational STEM Education Matters

Transnational STEM programmes must balance academic consistency, interdisciplinary expertise, and local capacity building across geographically distributed campuses. These challenges are particularly acute in fintech education, where expertise spans AI, data science, software engineering, cloud systems, and finance.

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Research Gap

Few transnational STEM models integrate **block teaching**, **flying faculty**, and **co-teaching** within a single coordinated framework.

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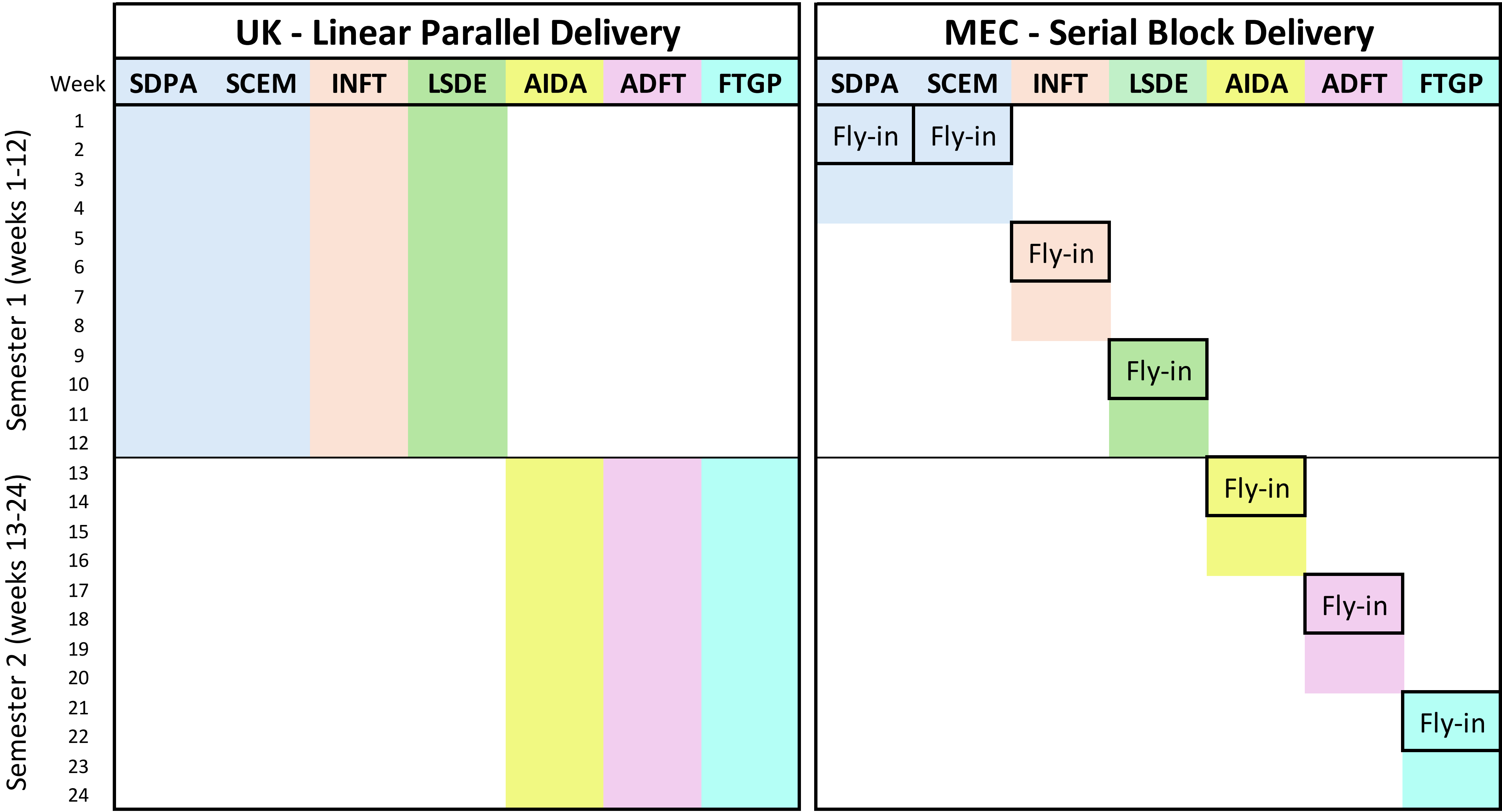
Key Contribution

We introduce an integrated pedagogical-operational model for delivery at the University of Bristol's Mumbai Enterprise Campus (MEC), opening in August 2026.

The model combines **block teaching**, **flying faculty**, and **co-teaching** to address three interrelated challenges:

- D1.** Academic consistency across locations
- D2.** Interdisciplinary expertise under staffing constraints
- D3.** Integrating teaching across distributed academic teams

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Bristol: parallel semester-based delivery. **MEC:** integrated response to D1–D3 using serial 4-week blocks, flying faculty, and local co-teaching.

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Pedagogical Design

- The MEC model combines:
- intensive block teaching
 - activity-based learning
 - staged coursework assessment
 - real-world financial datasets
 - collaborative interdisciplinary teaching

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Longitudinal Comparative Studies

- We propose two complementary longitudinal studies:
- Student experience and academic outcomes:**
Comparing engagement, learning behaviours, and performance across UK parallel delivery and MEC block delivery (D1–D2).
 - Staff development and teaching coordination:**
Examining co-teaching, interdisciplinary collaboration, and embedded academic capacity building (D2–D3).

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Embedding Academic Capacity Building

Co-teaching between Bristol flying faculty and locally recruited MEC staff supports progressive development of pedagogical and domain-specific expertise through repeated collaboration during programme delivery.

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Methods

- Evaluation includes:
- repeated student surveys
 - academic performance analysis
 - staff discussions and interviews

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Takeaway

A transferable framework for **interdisciplinary STEM programmes**, **constrained staffing environments**, and **geographically distributed teams**.

Bristol

meet

Mumbai

