



# Scientia Education Investment Fund Grants Final Report

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**UNSW Business School Integrated Learning Laboratory (iLab)**

UNSW Business School

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## **1. Executive Summary**

### **The Project**

The Integrated Learning Laboratory (iLab) created by the UNSW Business School iLab project team is a world-class financial information and technology learning laboratory for delivering a career-focused student learning experience and acts as a hub to cultivate innovations in the finance industry.

### **The Context**

The School of Banking and Finance delivered approximately 21,000 course enrolments in 2018 and predominantly used traditional lecture-style delivery to achieve student learning outcomes. The iLab project uses UNSW 3+ structured-learning activities to systematically introduce work-integrated learning iLab activities into existing courses to let students apply finance theory using software and data applications which are used in more than 120 job roles in the finance industry.

### **The Priorities Addressed**

The iLab project addresses UNSW 2025 Strategic Priority A2: Educational Excellence, with an emphasis on Initiative 1: Design, develop and deliver the UNSW Scientia Educational Experience by “focusing on work-integrated learning and support for future careers”, and Initiative 3: Systematically integrating technology into teaching.

### **Outputs**

The physical infrastructure of the iLab located at BUS G21 accommodates 64 students in a teaching area and 4 additional students in a breakout Finance Resource Centre that is accessible by students for projects. The facility and associated data platforms have been operational since Feb 2019.

iLab learning activities have been implemented across 13 courses in 2019 and they are expected to benefit 6,981 enrolments across Term 1 to Term 3 based on 7 Aug 2019 enrolment statistics. The iLab is also used by 11 courses across four other schools as a flipped classroom in 2019.

The iLab is central to the delivery of several initiatives of the Business School for 2020: new courses in the new Financial Technology major in the Bachelor of Commerce and Master of Finance, and a new course in socially responsible investing. This will amount to a total of 16 iLab courses in 2020.

### **Key Findings and Recommendations**

The iLab is an iconic and functional flip-laboratory used by the university to showcase cutting-edge student facilities to visitors and selected to host the first Vice Chancellor Business School visit in 2019.

The 2019 T1 myExperience feedback from the 2,215 enrolments across 9 courses with iLab activities include many positive student comments. The most common themes were: 1) applying theory with real world data and software, and 2) makes students understand the teachings in lectures and tutorials better. See Section 4 Evaluation for more details. Student feedback also suggest that they want more and better integrated iLab activities. They want clearer instructions and better assignment submission and feedback platforms. An iLab activity administration website is under development to address the logistic aspects of the iLab to improve student experience.

Resources to complete the web-interface and on-going iLab activity implementation support in future should generate good educational experiences.

The iLab is intended to be a student and alumni hub for innovations in finance. It is already drawing attention from FinTech entrepreneurs and alumni guest speakers.

Estate Management project budget should be given automatic year end rollover.

## 2. Outcomes and Impact

### Major Achievements of Project Deliverables

The project deliverables as listed in the application have all been achieved. Specifically:

- i) **Curriculum mapping, activity planning and scheduling**
  - Completed as per 2019 Feb report.
  - Fine tuning and improving activity delivery based on 2019 T1 feedback.
- ii) **Facility Renovations and IT build of the iLab**
  - **The iLab is operational** and is a dual function laboratory and flip classroom design following consultation of PVCE teaching space adviser.
  - The room hosts 64 students in 8 pods and with a resource centre/break-out room.
  - The computer monitors are retractable into the tables, and host licensed financial market data and trading platforms.
  - See photos (page 8) of the iLab in flipped and lab mode.
  - Enhancements have been made to the pods in May 2019 to eliminate the jamming of the computer retraction mechanism experienced in the first two months of operation.
  - Funds deployed as follow
    - **SEIF grant (\$180,000) have been fully spent** (see 5. Financial for details).
    - The Business School funded physical infrastructure (computers, IT, furniture, Estate Management building work, project management) and curriculum design.
- iii) **Appointment of key personnel and governance committee**
  - **Completed** as per the 2018 progress report.

### Strategic Priorities Addressed

The iLab project addresses UNSW 2025 Strategic Priority A2: Educational Excellence and with an emphasis on

- Initiative 1: Design, develop and deliver the UNSW Scientia Educational Experience by “focusing on **work-integrated learning** and support for **future careers**”.
- Initiative 3: Systematically integrating technology into teaching.

### Project Impact

**Broad based impact:** In 2019, iLab learning activities has been implemented across 13 finance courses and they are expected to benefit **6,981** enrolments (1/3 of all finance enrolments) based on 7 Aug 2019 enrolment statistics. Students reports that they develop a deeper understanding of finance theory and how it is applied in the real world. See student comments in Section 4 Evaluation.

**Belonging and Community Building:** In addition to its educational impact, the iLab is a visual display of the University and the Business School investment in student education and learning activities. Students majoring in finance account for over 70% of all students in the Bachelor of Commerce. Students attend classes across generic venues across the UNSW campus. The integration of structure learning into core finance courses ensures all finance students have a shared experience at the purpose built iLab and this provides a sense of belonging that is likely to last after they graduate. Its technology and work-integrated learning activities send a strong message that the

University and the Business School cares about the application of knowledge to the real world and student career outcome.

**Synergy with The New Financial Technology Major:** The popular iLab course FINS3648 Banking, Finance, and Technology introduces students to Python programming and technology disruptions in banking and finance. FinTech entrepreneurs, FinTech hub operators, and alumni have been guest speakers. Several internships have been resulted via the connections established between students and guest speakers.

Leveraging on the positive sentiment of the iLab, and the popularity and industry demand for financial technology courses, a new Bachelor (Australia first) and Master major in Financial Technology has been created and currently being advertised. Career and student response to the new major have been very positive. Three thought-leading iLab dedicated courses will be introduced in 2020, two in financial technology (data and programming), and one in socially responsible investing. All of them have been designed or co-designed by industry practitioners to ensure work-integrated focus and producing students with demanded skills. The deployment of courses in the Financial Technology major via the iLab is expected to deliver a world leading major in financial technology with its tight integration of finance, practice, technology, scope, and compactness. It provides reasons for domestic postgraduate students and students from technology-oriented country such as India to study at UNSW.

### 3. Dissemination Strategies and Outputs

The deployment of the iLab facility involves a centrally managed and inclusive deployment of iLab learning activities across core and strategically important courses to ensure all finance students experience the benefit.

The information platform selection and iLab activity design follow a systematic process to ensure learning activities delivers the intended education outcomes. Most individual students have limited time in the iLab, the information platform FactSet for mass deployment in large core courses is selected for its price competitiveness and permission for individual student web-based login to the platform. iLab activities for large courses are designed with a common two-step structure: 1) introduce students to an aspect of a relevant technology (there are 18 databases in the FactSet platform alone), and 2) a follow-up group learning activity. Students can access FactSet and learn at their own time outside of the two iLab sessions.

The trading platform IRESS has more restrictive licencing requirement and is managed by running the whole course in the iLab rather than as structured learning activities to facilitate more frequent in class simulation.

| <b>2019</b>       | <b>T1</b> | <b>T2</b> | <b>T3</b> | <b>Total</b> | The distribution of the <b>6,981 enrolments across 13 finance courses</b> across programs and terms is listed in the table. In addition to using the iLab for finance education, the Business School also uses the iLab to conduct the Microsoft Excel Certification program which is highly valued by students and employers. The flip-lab feature of the iLab has also been valuable as it has been used by 11 courses in accounting, information system, management, and taxation as a flip-class room in 2019. The AGSM and the Business School also host meetings at the iLab in 2019 |
|-------------------|-----------|-----------|-----------|--------------|--|
| UG Courses        | 5         | 4         | 6         | 6            |  |
| UG iLab Enrolment | 1666      | 1539      | 2235      | 5440         |  |
| PG Courses        | 4         | 4         | 6         | 7            |  |
| PG iLab Enrolment | 549       | 356       | 636       | 1541         |  |

## 4. Evaluation of Project Outcomes

### ***Icon and Marketing***

The iLab is an iconic and celebrated flip-laboratory learning space. It has been used by the Business School marketing team and the university's Estate Management to show case cutting edge education facility to visitors from other universities. It has been used by the marketing team to create promotional videos of UNSW programs overseas.

### ***Vice Chancellor and Management Team Visit***

The iLab is the chosen venue by the Business School to host the first Vice Chancellor and the university senior management team Business School visit in 2019. The Vice Chancellor commented favourably on the iLab as an achievement of the school in his 2019 Business School visit.

### ***Strategic Benefits***

Strategy benefits of the iLab for student, alumni, and entrepreneur community building and synergy for offering the new Financial Technology major can be found under "Project Impact" (Section 2 Outcomes and Impact).

### ***2019 T1 myExperience Feedback***

Many positive comments about iLab activities. For example,

#### ***FINS1612 Capital Markets and Institution***

"I like the iLab session, it made me understand better how relevant the course is to the real world."

"More labs and try to expand on the use of FactSet – it's a great idea."

#### ***FINS2624 Portfolio Management***

"iLab exercises were awesome and probably the best assessment I have done so far at university. I would recommend weighting them more in terms of the assessment structure and developing this content more. It was amazing to have these practical Excel skills taught."

"The iLab was very helpful. I was confused on a few concepts in the course but after doing the first iLab it cleared up a lot of things and helped me understand better."

#### ***FINS5513 Investment and Portfolio Selection***

"The iLab is my favourite part, which helps me a lot in excel exercise as well as portfolio related projects."

"I love iLab class. It helped me to understand the concept easier. We should have more to practice the theory in the lecture."

Comments on how to improve includes the followings,

FINS1612 "More labs and try to expand on the use of FactSet – it's a great idea."

FINS3616 "Instructions for the iLab assignment could be more clearly given and the workshop should have been conducted closer to the end of the term."

FINS3666 "More IRESS simulations in class."

FINS5566 "I think we should have more simulations during the 10 weeks, instead of having the final exam."



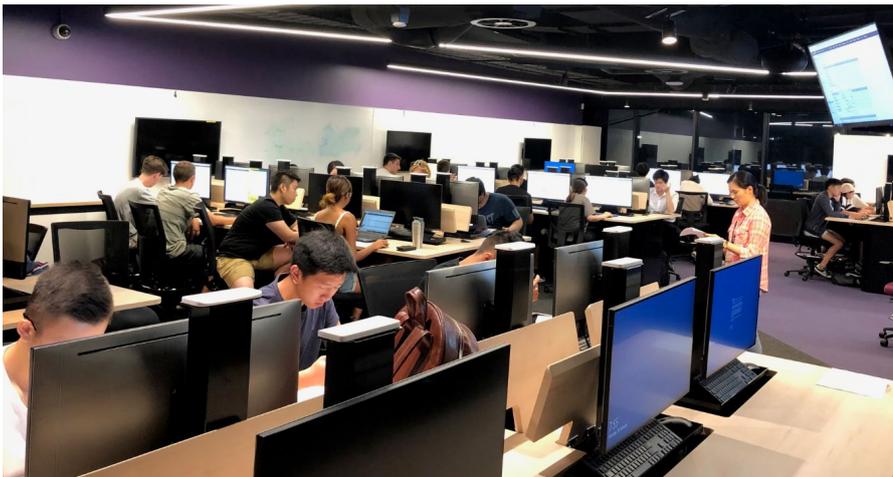
**The Flipped Mode**



**The Flipped Mode in Action**



**The Lab Mode**



**The Lab Mode in Action**