Developing a Finance Lab

Pouya Safi
Extensive collaborative effort

- **2011**
  - Research and groundwork on trading labs
- **Spring 2012**
  - 2 Bloomberg terminals acquired by Library
- **September 2013**
  - Launch of a small lab with 9 Bloomberg terminals, 1 lab manager, 4 volunteer assistants
- **September 2015**
  - State-of-the-art learning & teaching facility, 34 workstations
<table>
<thead>
<tr>
<th>University</th>
<th>Bloomberg terminal</th>
<th>Trading Lab</th>
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</thead>
<tbody>
<tr>
<td>University of Alberta</td>
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<td>University of British Columbia</td>
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<tr>
<td>Brock University</td>
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<td>University of Calgary</td>
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<td>Concordia University</td>
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<td>Dalhousie University</td>
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<td>University of Lethbridge</td>
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<td>McGill University</td>
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<td>Memorial University</td>
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<td>UQAM</td>
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<td>Simon Fraser University</td>
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<td>Université de Sherbrooke</td>
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<td>University of Toronto</td>
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<td>University of Waterloo</td>
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<td>University of Western Ontario</td>
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<td>University of Windsor</td>
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Labo de recherche et d’apprentissage en finance
Financial Research and Learning Lab
What do we do?

- A learning and teaching facility with training facilitated by the lab manager and faculty

- Research facility with access to many leading financial databases and software supported by the lab manager and the assistants

- Develop (and implement) interactive assignments, simulations, cases and course content

- Seminars, training sessions and workshops for students and faculty

- Provide students a collaborative learning environment
What we have

- Fully equipped teaching space
  - Podium
  - Dual projection system
  - Document reader
  - Recording capability
  - Full presenter control
- Seating for 68 in the main room
  - 34 Computers with dual monitors
- 6 TV's displaying news and business channels (additional projection of content)
What we have (Cont’d)

• 2 Enclosed study rooms
  • Table with seating for 5 and 6
  • Screen and computer with all resources (minus Bloomberg)
  • 1 Room with Smart Board
  • Whiteboard walls

• Laptop with Bloomberg
  • Can be used to give classroom training

• Ticker tape outside lab
Lab Assistants

- 6 Lab Assistants Each Year (Students)
  - Gives students access to help in evenings and weekends
  - Provide lab oversight and extended hours
  - Help with training of students
  - Additional resource for professors and research needs
  - Help with planning and implementation of lab projects
Lab Resources

34 computer terminals running industry standard financial research databases and real-time learning software

- Bloomberg (12 Terminals)
- CFMRC/TSX
- Datastream
- Factset
- Haver Analytics
- Rotman Interactive Trader
- SDC Platinum
- S&P Capital IQ
- Thinkorswim
- Statistical Software: Stata, R, E-Views, SPSS, SAS
## Lab Resources

<table>
<thead>
<tr>
<th>Software/Database</th>
<th>Purpose (Student Experience/Research)</th>
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<tbody>
<tr>
<td>Bloomberg</td>
<td>Student Experience and Research</td>
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<tr>
<td>Compustat</td>
<td>Research</td>
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<td>CRSP</td>
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<td>E Views</td>
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<td>Rotman Interactive Trader</td>
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<td>Statistical Software</td>
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<tr>
<td>thinkorswim</td>
<td>Student Experience</td>
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<td>WRDS</td>
<td>Research</td>
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Curriculum Integration
Curriculum Integration

- **Portfolio Management**
  - Security Analysis and Portfolio Creation
  - Summative

- **Equity Valuation**
  - Live Case Valuation
  - Cases
  - Summative Valuation

- **Fixed Income Investments**
  - Fixed Income Simulations (RIT)

- **Marketing**
  - Summative (Industry and Company Profile)
Curriculum Integration (Cont’d)

• **Finance Theory**
  • Finance Cases (RIT)

• **(E-)MBA Accounting + Corporate Finance**
  • Summative- Comparison between two public companies
  • Finance Simulation Day (RIT)

• **Finance, Ethics, and Social Responsibility**
  • Real-time news discussion
  • Summative (CSR and ESG Analysis)

• …
Curriculum Integration Requests

- **Invitation**
  - Email sent to Faculty at end of academic year for integration/project support

- **Proposal Evaluations**
  - Requests are evaluated based on best fit and most benefit to students

- **Project Creation & Review**
  - Draft and final project is created and sent to Faculty for review

- **Training to Faculty**
  - Ensure faculty understand all elements

- **Training for Students**
  - Provide group training and guides to support students
Finance Lab Activities
Sessions and Activities

- Resources Specific Training
- Course Specific Training
- Bloomberg Training
- Competitions
- Stock Pitch Days
- Workshops include:
  - Financial Modeling Boot Camp
  - Finance Expert of the Month
  - Self-Direct Investing Seminars
  - Guest Speakers
  - …
Competitions for Students

- Rotman International Trading Competition
- CFA Equity and Ethics Research Challenge
- Telfer Trading Competition
- Portfolio Management Competition
- TMX Case Competition
- Jeux de Commerce
- And more…
Telfer Capital Fund (TCF)
TCF Overview

• Necessary next step in legitimizing our space

• TCF developed with help of Dean’s Advisory Committee and funded through donations

• Continues to enhance experiential learning with real-life analysis and decision making

• Value based investment portfolio which is educational and academic in nature

• Currently $100,000 invested, with a goal of $50,000 in new money each year
Four Stages of TCF Program

- Trainee
- Mentor
- Analyst
- Portfolio Manager / PM Leader
Program Details

- 3 Year Program
- 7-10 Students Recruited Each Year
  - Move from Analyst to PM
- Workshops, Toronto Trip, Mentorship
- Student Empowerment as PMs
- Internships in Summer
- Completion of CSC (Series 7) and CFA Level 1
- Integration with Finance Curriculum
Scholarship Opportunities

- Canadian Securities Institute
  - Canadian Securities Institute
  - Moody's Analytics Training & Certification Services
  - 500$

- CFA Institute
  - CFA Institute
  - 800$
Activities and Operations

**Weekly**
- Workshops
- Stock Pitches
- Sector Updates
- Portfolio Review and Investment Decisions

**Bi-Monthly**
- Presentation of Results to Investment Committee

**Annually**
- Annual Reporting
- Presentation to Board of Advisors
Internal mentorship:
- Analyst trainee → Analyst → Portfolio Manager

External mentorship:
- Portfolio Manager → Professional mentor (Toronto)
Toronto Trip
Key Elements of Successful Finance Labs
How did we get to today

- Learning From Mistakes
- Research
  - Site Visits & Interviews
  - Surveys
  - Metrics & Annual Reports
- Commitment to Ongoing Activities
- Building around Students and Faculty
A good diverse suite of software and databases brings in students and provides buy-in by faculty

- **Analysis Databases and Software:**
  - Bloomberg, Capital IQ, Factset, Eikon…

- **Research Databases**
  - WRDS, Compustat, CRSP, SDC Platinum…

- **Simulation Software**
  - RIT, RPM, Think or Swim…

- **Statistical Software**
  - Matlab, SPSS, SAS…

**Must find Balance Between Research Focused and Student Software**
A proper organizational structure is essential for lab usage, development and growth

- Professors that can champion integration and promote the space help with early adoption

- Manager/Director that provides:
  - Expertise on the available suite of products (to both students and faculty)
  - Develops programming and events throughout the year
  - Supports professors with integration
  - Teachings on market structure and case learning which helps with active usage and overall value proposition
A proper organizational structure is essential for lab usage, development and growth (cont’d)

- Assistants (full-time or students) that can:
  - Support students with software and databases
  - Supervise the space for extended hours
  - Help with organization of events, seminar and presentations
  - Help facilitate smooth operation and free time for the Manager to concentrate on development of the space

**Labs being run solely by IT have very little curriculum integration, difficulty with professor buy-in and little to no extra-curricular activities held at the lab**
Sponsorship and partnerships to provide financial resources for construction, hardware, software and databases, competitions, seminars and workshops

• Most labs visited have sponsorships with naming rights

• Sponsor involvement ranges from nothing to full relief lab rights and advisory board for decision making with annual report requirements

• Sponsorship can be one time donation or annual payments: Amounts range from $200k to $1 Million plus and all naming rights are subject to predefined duration via a contract

**Finding the right partner can be difficult and long process…do not build sponsorship into budget!**
A practical layout conducive both to interactive learning and the ability to work as a teaching space

- Lab must be able to be used as a teaching space with excellent focal points

- Group pods can work but the difficulty is ensuring that students are not facing away from the center and ensuring that the space can still be used for teaching

- Push technology can be used to create interactive learning by being able to show other students' screens and display only presenters' screen
Key Elements

A practical layout conducive both to interactive learning and the ability to work as a teaching space (Cont’d)

• Glass for visual is important and ensuring lab is in a high traffic area (especially if you want sponsorship)

• Some element of a trading floor look is important for atmosphere

**Try to incorporate all physical needs the first time!**
The space should be led by both course integration and extracurricular programming

- Full courses designed to be taught in the lab by either/both Professors and Lab Manager
  - These are usually courses focused on investments, market structure, and case based learning

- Assignments and cases designed from the available resources in the lab

- Competition funding, training and support (Internal & External)
Key Elements

The space should be lead by both course integration and extracurricular programming (Cont’d)

- Seminars and workshops offered year round
- Usage by school Clubs and Student Managed Funds
- Opportunities for all University Faculties to use the space

**The lab won’t drive itself!**
Annual Reporting + Metrics

• Completed at the end of each academic year

• Provides a snapshot to improve upon

• Takes a look back at:
  • Year’s Activities, Programs and Highlights
  • Integration
  • Resource Usage
  • Lab Metrics
  • Comparison of Previous Years
  • Focus for the Next Year
# Annual Reporting + Metrics

## Previous Year Metrics Comparison

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<tbody>
<tr>
<td>Class Integration</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>25%</td>
</tr>
<tr>
<td>Number of Training Sessions</td>
<td>130</td>
<td>160</td>
<td>136</td>
<td>-15%*</td>
</tr>
<tr>
<td>Number of Students Trained</td>
<td>347</td>
<td>622</td>
<td>1549</td>
<td>149%</td>
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<tr>
<td>Events/Workshops Held</td>
<td>25</td>
<td>50</td>
<td>125</td>
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</tr>
<tr>
<td>Workshop/Event Total Attendance</td>
<td>591</td>
<td>1178</td>
<td>2400</td>
<td>104%</td>
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<tr>
<td>TTC Competitions</td>
<td>15</td>
<td>84</td>
<td>120</td>
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<td>PMC Competition</td>
<td>88</td>
<td>100</td>
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<td>14%</td>
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<tr>
<td>Hourly Average</td>
<td>5.5</td>
<td>7</td>
<td>18</td>
<td>157%</td>
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<tr>
<td>Daily Usage Average</td>
<td>37</td>
<td>63</td>
<td>180</td>
<td>186%</td>
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<tr>
<td>Weekly Usage Average</td>
<td>295</td>
<td>414</td>
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<td>Monthly Usage Average</td>
<td>847</td>
<td>1235</td>
<td>4353</td>
<td>252%</td>
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<tr>
<td>Busiest Month</td>
<td>November/March</td>
<td>November/March</td>
<td>November/March</td>
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<td>Busiest Times</td>
<td>11:00AM-6:00PM</td>
<td>11:00AM-6:00PM</td>
<td>11:00AM-6:00PM</td>
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<tr>
<td>Busiest Day</td>
<td>Monday</td>
<td>Wednesday/Thursday</td>
<td>Wednesday/Thursday</td>
<td>N/A</td>
</tr>
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</table>

**Average Growth of all Activities/Usage** 116%
Our Success

- **Enhanced Student Experience**
  - Curriculum Integration (Merging Theory with Practice)
  - Competitions
  - Certification and Simulations

- **Better Employment Prospects**

- **Lab Usage at Capacity even with Physical Expansion**
Our Challenges

• **Human Resources**
  • Keeping extended hours
  • Increasing integration and development
  • Maintaining level of services

• **Software and Databases**
  • Meeting research intensive needs of faculty
  • Balancing student experience needs for diverse industry standard knowledge

• **Shrinking budgets… but continuing demands for $$$ specialized resources**

• **Attracting Donor Money**
Lab Website

Lab website contains resources for students and faculty including guides, calendar, and lab details:

http://uottawa.ca.libguides.com/financelab
Financial Research and Learning Lab

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