LEAPS
Impact Assessment:
Methodological Review

Terry Lansdown

t.lansdown@hw.ac.uk

Background

- LEAPS commissioned Heriot-Watt to
  - develop, and
  - review a methodological framework for the evaluation of LEAPS student performance
- Can we objectively evaluate LEAPS student performance?

t.lansdown@hw.ac.uk

Aims

- evaluate the completeness of the provided (2009/10) LEAPS student dataset
- test the methodological steps to compare LEAPS students to non-LEAPS students
- identify, highlight and recommend appropriate measures to mediate any shortcomings in our proposed methodology.
- test our recommended method to determine factors predictive of performance
- present our methodological framework to facilitate subsequent impact evaluations
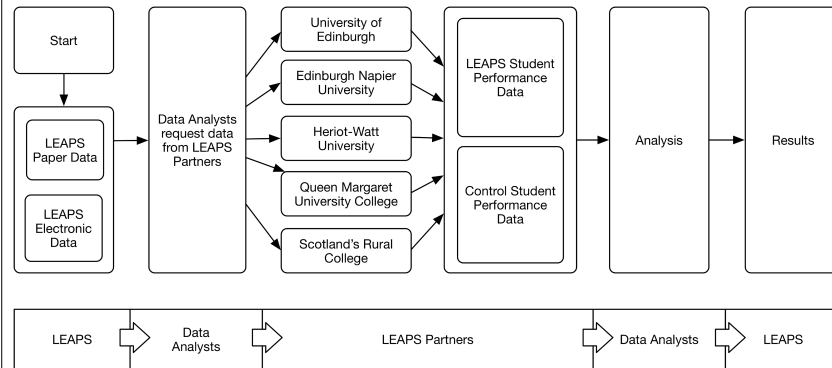
t.lansdown@hw.ac.uk

Support

- Rhona Scott (LEAPS)
- Ged Lerpiniere (LEAPS)
- Jean Campbell (HWU)
- Ann Jones (HWU)
- Sue Cowan (HWU)

t.lansdown@hw.ac.uk

Evaluation Process

Data Sharing Requirements

- protect the student's identity
- comply with data protection requirements
- establish a 'template' for subsequent sharing
- scope of initial data provision needs to be agreed by: LEAPS, Data Analysts, Partner Data Protection Officers, Partner Registry Staff

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Data Processing

- initial 'Data Sharing Agreement' produced, and agreed
- encrypted LEAPS data provided to HWU with unique identifier added
- Registry data extraction undertaken
- data integrity reviewed (LEAPS & HWU)
- Anonymised records returned with associated data

Dataset Review

- what 'errors' exist in the LEAPS data?
- do they matter?
- waiting a few weeks would improve analysis, exam boards are pending

How Much LEAPS Data is Needed to Match with HWU Data?

	Percentage Match
Forename, Surname, Date of Birth, University Application Year	96%
+ Subject Area (introduces ambiguity)	95%
Match with UCAS/School Supporting Statement	88%
Overall match with HWU data structures	98%
Ambiguities	20%

Ambiguities (20%)

- date of birth (typographical?)
- forename (typographical, human inconsistency?)
- year of entry (delayed start)
- rejected
- not-matched (n=1)
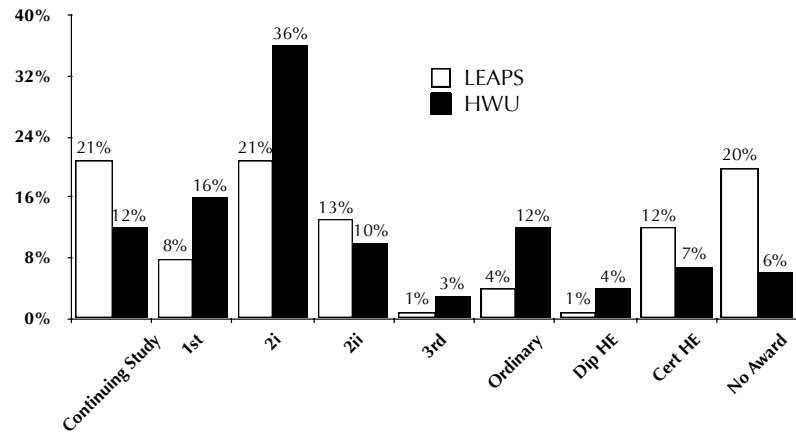- conditional offer declined (n=1)

Recommendations

- LEAPS should adopt the Scottish Candidate Number as a student identifier
- LEAPS should align with Partner academic year terminology
  - e.g., a LEAPS 2009 student is a Heriot-Watt 2010/11 entry student
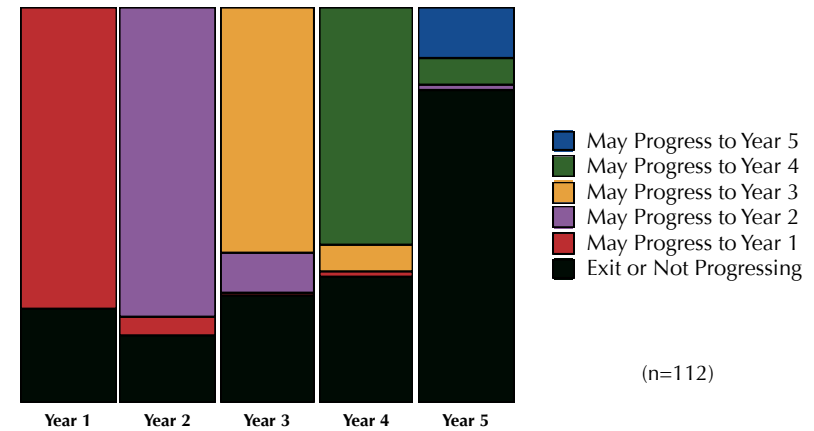

Test Methodology: Compare LEAPS to Non-LEAPS students

- Individual level control data is not available at this stage
  - further negotiation is required to address internal sensitivities
- 2009 LEAPS data and 2013 Heriot-Watt Summary data was tested

Slide 13: Degree Outcome

Degree Outcome

Bar chart comparing LEAPS (white) and HWU (black):
- Continuing Study: LEAPS 21%, HWU 12%
- 1st: LEAPS 8%, HWU 16%
- 2i: LEAPS 21%, HWU 36%
- 2ii: LEAPS 13%, HWU 10%
- 3rd: LEAPS 1%, HWU 3%
- Ordinary: LEAPS 4%, HWU 12%
- Dip HE: LEAPS 1%, HWU 4%
- Cert HE: LEAPS 12%, HWU 7%
- No Award: LEAPS 20%, HWU 6%

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Slide 14: Progression by Year

Progression by Year

Legend:
- May Progress to Year 5
- May Progress to Year 4
- May Progress to Year 3
- May Progress to Year 2
- May Progress to Year 1
- Exit or Not Progressing

(n=112)

Year 1   Year 2   Year 3   Year 4   Year 5

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Slide 15: Recommendation

Recommendation

- track students for more than five years, if feasible

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Slide 16: Does Summer School Attendance or School Type Predict Success in Higher Education?

Does Summer School Attendance or School Type Predict Success in Higher Education?

- Logistic Regression did not reveal either Summer School Attendance, or School Type as significant predictors of degree success (Chi Square = 5.11, df = 2, p = 0.07)
- Summer School attendance approached significance (p = 0.062)

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Does Summer School Attendance or School Type Predict Final Degree Grade?

Multiple Regression using Summer School attendance and School Type as Independent Variables, did not significantly predict final grade (F = 2.32, df = 2, p = 0.11)

Recommendations

- a larger sample is required to meaningfully test the predictive values
  - anecdotally, my suspicion is that Summer School attendance would predict degree success
- methodologically, available data supports statistical analysis, and
- currently 80% are either continuing study or successfully completed

Recommended Methodological Refinements

- complete anonymised year control data is required for more substantive analysis
- other partner engagement is required to determine statistical and 'sensitive' comparisons with controls

Questions

- successful matches were surprisingly high, did students feedback on their preferred option?
- what is a successful LEAPS student outcome?

Conclusions

- appropriate access to substantive control data remains outstanding.
- we have identified a very high proportion of students
- we can compare their performance with aggregate data
- we can methodologically determine factors predictive of success or failure

t.lansdown@hw.ac.uk

Next Steps…

- Methodologically, we can evaluate student performance
  - no insurmountable barriers exist with respect to the Heriot-Watt University data
- Should you wish to collaboratively proceed…
  - data sharing agreements will need to be established
  - partner 'key facilitators' will need to be identified
  - control data 'sensitivities' need to be resolved

t.lansdown@hw.ac.uk