Iain Embrey
PhD Student & ESRC Studentship holder
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Academic qualifications:

2017-2019: PhD in Economics – Lancaster University (submitted 21 September 2019);
2016: MSc Economics (with Distinction) – Lancaster University (award pending; integrated with PhD);
2012: Master of Education (with Distinction) – The University of Birmingham;
2010: PGCE (conferring qualified teacher status) – The University of Birmingham;
2009: Master of Mathematics (1st Class Honours) – The University of Warwick.

Publications:

States of Nature and States of Mind: A generalized theory of decision-making. Theory and Decision, 2019.

Working Papers

Re-estimating the Technology of Cognitive and Noncognitive Skill formation. Revise and Resubmit at JHR.
Modeling Advanced Persistent Threat Campaigns. Revise and Resubmit at Risk Analysis. Joint with Kim Kaivanto.
The Education Trap: Could a grades-focused educational system be perpetuating poverty in advanced economies? Accepted for the 2019 EEA conference in Manchester; submitted to JEBO 19/07/2019.
On the Benefits of Normalization in Production Functions. Submitted to the Journal of Economics 30/04/2019.
A Review of Dual-self Modeling. Submitted to Economic Surveys 15/02/2019.
Noncognitive Skills: Theory and Empirics – Job Market Paper, not yet submitted. Abstract:

Noncognitive skills have provoked substantial research interest in recent years. However, existing evidence for their importance relies heavily upon reduced-form regressions that do not account for the simultaneous production of cognitive and noncognitive skills. Moreover, existing constructs of noncognitive skill are typically chosen for their convenience, or else for their explanatory power over psychological survey items. In response, we analyze a decision-theoretic model of educational development to derive five candidate noncognitive skills, and we test their importance by adapting an established longitudinal and structural econometric model of multidimensional skill formation. We find: first, that noncognitive skills matter for cognitive development; second, that different aspects of noncognitive skills matter to different degrees; and third, that once a child begins to take her own decisions, her propensity to think analytically becomes the most important noncognitive determinant of her ongoing cognitive development.

Teaching experience:

2016-2019: Workshop Teacher, Lancaster University

- c.3 weekly workshops of 20-40 first-year students for 25 weeks of: *principles of economics*
- Exam checking
- Mark-scheme creation
- Invigilation
- Assessment
- Faculty research ethics committee member
- Seminar series coordinator

Official student evaluation results:

Gives clear explanations: 4.4/5 Makes subject interesting: 4.3/5 Readily contactable: 4.5/5

Unsolicited message from Head of Department:

" I just received the aggregate evaluations for Econ102 Macro and several comments mention how good your tutorial sessions were. "

2010-2015: Teacher of Mathematics, Swanshurst School, Birmingham (full time; ages 11-19yrs)

- Head of sixth form maths
- Head of year 10 maths
- Duke of Edinburgh award coordinator
- Whole school enrichment coordinator
- Whole school end-of-year activity days coordinator
- Formal appraisal of colleagues
- Mentoring of newly qualified colleagues

Key achievements:

GCSE Mathematics teaching: *Across the school, 11% of yr 10 pupils achieved their forecast and 50% achieved within one grade of it; of these my middle set achieved 40% on forecast, and 88% within one grade of it.*

A-Level Mathematics teaching: *I took over the underperforming D1 module, and within two years the module average points score had risen from 50.5 to 115.6 [1 AS grade ≡ 15pts].*

GCSE Mathematics leadership: *As Yr 10 Maths coordinator: 0/297 pupils graded U on both Yr10 mock GCSE exams (cf. 18 in the previous year), despite 9 failing to achieve a SATS level 2 by January of their year 9 (cf. one in the previous year).*

A-Level Mathematics leadership: *AS overall average point score up from 69.6 to 82.2; A2 overall average point score up from 185.5 to 210.*

An anonymous comment collected during a sixth form feedback exercise:

" Very enthusiastic; Great way of getting the work across; Happy and makes you want to learn; Great at explaining work; Motivative; Great passion for maths which encourages you to work; Brilliant!!!! "

Additional achievements:

I have competed for Scotland at kayaking and for GB at orienteering; I was twice named Warwick University sportsman of the year; I was presented with an outstanding service award at my orienteering club; I completed the Bob Graham Round (106km and 27,000ft ascent) in 22hrs 51mins; and my additional qualifications include: Lv4 Orienteering Coach; UKCC Lv2 Paddlesport Coach; Mountain Leader; Expedition Leader; 5* white water kayak leader; Coach Educator and Assessor (CTS and IAPS qualifications rsp.); DofE Supervisor, Assessor, and Manager; 16hr outdoor First Aid; Full D1 minibus licence.

Academic references may be sought from:

Professor Steve Bradley
Acting Vice Chancellor
Lancaster University
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Dr Kim Kaivanto
Director of MSc Money, Banking & Finance
Lancaster University
k.kaivanto@lancaster.ac.uk