Est. 1841 | YORK ST JOHN UNIVERSITY

Bloom, Katy (2026) Effective development of pre-service teachers' metacognitive competencies. In: BERA TEAN Conference 2026, 20th-21st May 2026, Sheffield Hallam University. (Unpublished)

Downloaded from: https://ray.yorksj.ac.uk/id/eprint/14872/

Research at York St John (RaY) is an institutional repository. It supports the principles of open access by making the research outputs of the University available in digital form. Copyright of the items stored in RaY reside with the authors and/or other copyright owners. Users may access full text items free of charge, and may download a copy for private study or non-commercial research. For further reuse terms, see licence terms governing individual outputs. Institutional Repository Policy Statement

RaY

Research at the University of York St John

For more information please contact RaY at ray@yorksj.ac.uk

Effective development of pre-service teachers' metacognitive competencies

Dr Katy Bloom · Associate Professor of Science Education

Think back to your first year in HE

Think back to your first weeks of university.

Did anyone explicitly teach you how to read an academic paper?

How to regulate your own learning?

How to think about your own thinking?

Or did you just... work it out?"

Est. 1841

Five things worth knowing about our Year 1 student teachers

First-generation & widening participation profiles

Dual identity demand: learner *and* emerging teacher

Subject knowledge anxiety (especially science & maths)

The hidden curriculum — assumed, never taught

The metacognitive readiness gap — and why it matters (x2!)

Est. 1841 | YORK ST JOHN UNIVERSITY

Module design principles

- The supporting pillars: metacognitive development · self-regulated learning · academic reading & writing · core subject knowledge · agency & autonomy · reflection
- Theoretical scaffolding: Flavell, Zimmerman, Wingate
- Design decisions — 20 credits, Year 1, assessed how and why
- The "journey" metaphor: from dependent to self-directed learner [range of contexts and backgrounds; first in family, social justice, lack of metacognition in schools]

Est. 1841 | YORK ST JOHN UNIVERSITY

Pedagogy in practice

Key learning activities and their metacognitive rationale: explicit and implicit learning

How academic skills were embedded, not bolted on (Wingate's "integrated model")

Building agency: student choice [also reflected in other module assessments], reflection cycles, goal-setting structures

Authentic assessment design [3000 words]

Est. 1841 | YORK ST JOHN UNIVERSITY

Module overview

- Identity and belonging
- Introduction to metacognition
- ‘Metacog 2’ · learning journals
- Core subject audits & action planning
- Targets review & consolidation
- Finding reading [inc academic librarian liaison, writing support, study skills]
- Reflective writing
- Critical and evaluative writing
- How to engage with feedback
- Ethical use of AI
- Wider aspects of the teaching role

What the data showed

- Method: survey + interviews, plenary feedback [Mentimeter]
- brief positionality note
- Headline findings:
  - metacognitive awareness ↑,
  - academic confidence ↑,
  - strong engagement
- Selected student voice themes
  - Learning gains
  - Themselves *as* continuing learners
  - Removing distractions
  - 'Forethought'
  - Time to focus
  - Looking forwards

Est. 1841 | YORK ST JOHN UNIVERSITY

Harder than expected…

- STs not keeping journals
- ‘too hard’
- prevarication
- requires abstract, high-order thinking to monitor and regulate their own learning
- inaccurately assessing their own knowledge
- mistaking familiarity with content for mastery
- effort required to change ingrained, passive study habits

Discussion and implications

What this means for module/programme design in Year 1 HE

Transferability beyond the home discipline?

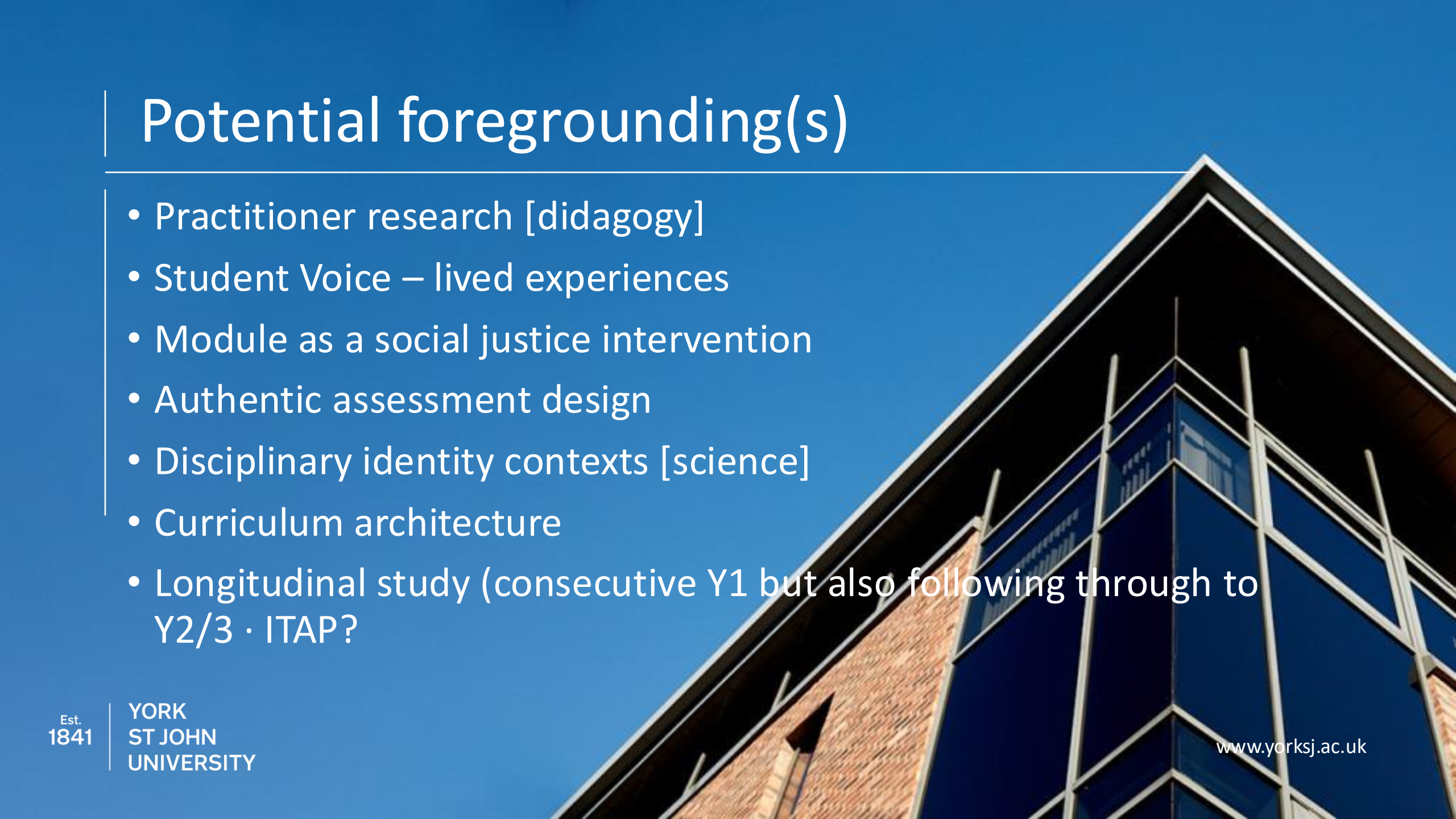
Sustainability and longevity

Questions for the ITE field?

Est. 1841 | YORK ST JOHN UNIVERSITY

Potential foregrounding(s)

- Practitioner research [didagogy]
- Student Voice – lived experiences
- Module as a social justice intervention
- Authentic assessment design
- Disciplinary identity contexts [science]
- Curriculum architecture
- Longitudinal study (consecutive Y1 but also following through to Y2/3 · ITAP?



Any questions?

k.bloom@yorksj.ac.uk