Learning gain in the HE context

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Overview

- Policy context
- Learning gain project
- Outcomes and graduates

'Academically Adrift'

- "gains in critical thinking, complex reasoning, and writing skills (i.e., general collegiate skills) are either exceedingly small or empirically non-existent for a large proportion of students";

- 36 percent of students experienced no significant improvement in learning (as measured by the CLA) over four years of schooling;

- less than one-half of seniors had completed over 20 pages of writing for a course in the prior semester;

- total time spent in academic pursuits is 16 percent; students are academically engaged, typically, well under 30 hours per week;

- scholarship from earlier decades suggest there has been a sharp decline in both academic work effort and learning;

- "students...majoring in traditional liberal-arts fields...demonstrated significantly higher gains in critical thinking, complex reasoning and writing skills over time than students in other fields of study. Students majoring in business, education, social work , and communications had the lowest measurable gains";

- 35 percent of the students sampled spent *five* hours or less a week studying alone; the average for all students was under 9 hours.

'lamentable'

'patchy'

'value for money'

Teaching Excellence Framework

- Not really about 'teaching' per se

- 'Student Experience Framework'

- Focus on impact and evaluation

Aspect of Quality *Areas of teaching and learning quality*	Teaching Quality (TQ)	Learning Environment (LE)	Student Outcomes and Learning Gain (SO)
Criteria *Statements against which assessors will make judgements*	Teaching Quality criteria	Learning Environment criteria	Student Outcomes and Learning Gain criteria
Evidence	Core metrics		
	• Teaching on my course (NSS scale 1) • Assessment and feedback (NSS scale 2)	• Academic support (NSS scale 3) • Non-continuation (HESA)	• Employment/further study (DLHE) • Highly-skilled employment/further study (DLHE)
	Split metrics		
	Additional evidence (provider submission)		
Statement of findings *Why a particular rating was awarded*	Brief description of why a particular rating was awarded including particular strengths		
Overall outcome *TEF rating*	The level awarded		

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HEFCE Learning Gain

HEFCE funding 13 mixed method projects involving 70 institutions over three years, using:

- Learner analytics/Grades
- Self-reported surveys
- Standardised tests
- Multiple measures of a specific theme

National Mixed Methodology Learning Gain Project (NMMLGP)

Higher Education Learning Gain Analysis (HELGA)

Learning Gain: Challenges

- Student engagement with tests and surveys

- Motivating students to invest in tests that don't contribute to assessment

- Context of English higher education

- Discipline bias in standardised tests

- Comparability of some entry and exit measures

- Reliability of student self-reports

- Data protection, data sharing, research ethics

But closest current proxies for learning are satisfaction surveys…
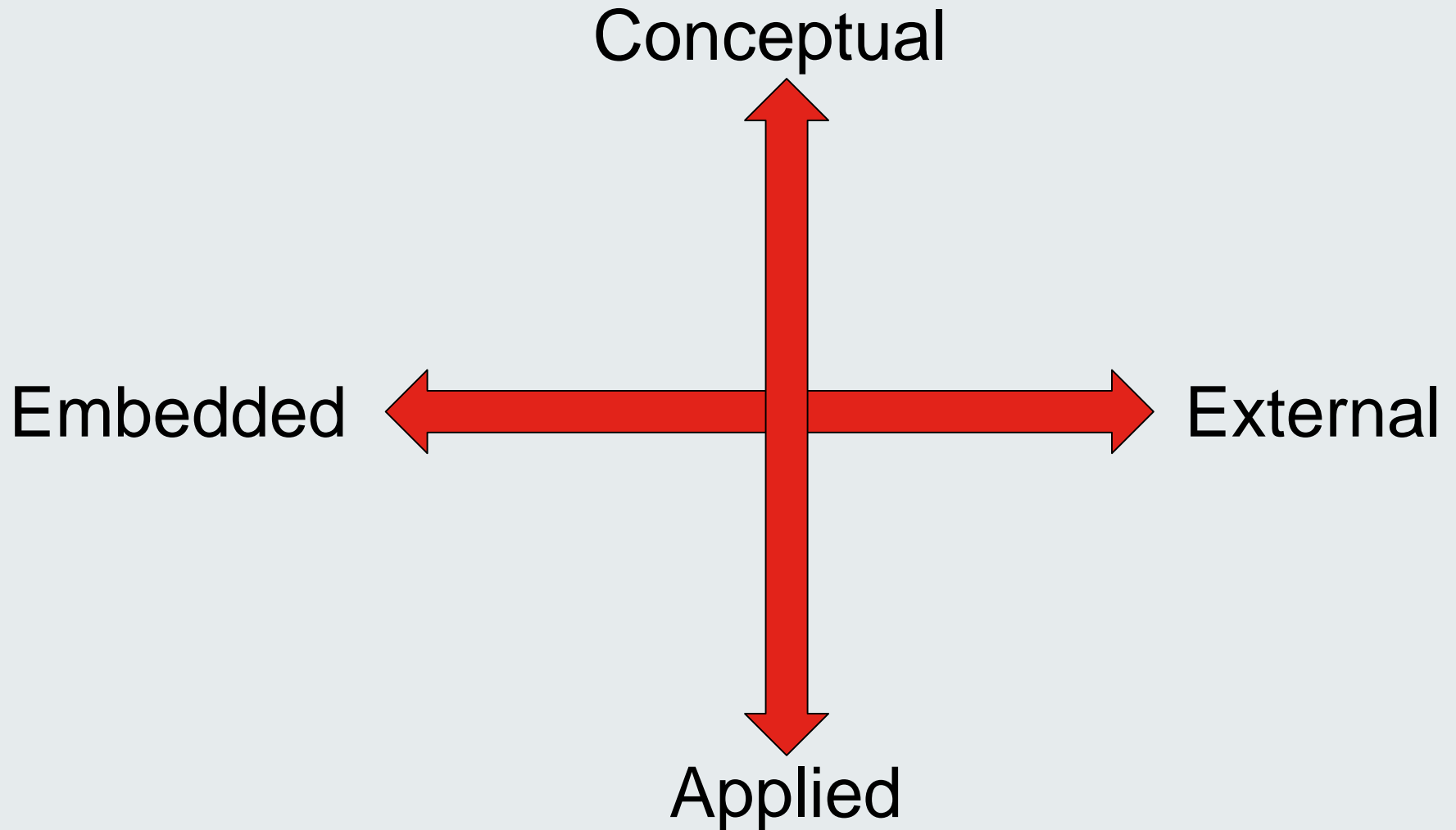
What is the purpose of higher education?

What is valued?

What are student expectations of higher education?

What should graduates know and be able to do?

Project types I

Conceptual

Embedded ⟷ External

Applied

Project types II

Existing data: high numbers, lots of sources

But what is it telling us?

New data: smaller numbers, selected subjects

How do we interpret findings?

Are the measures scalable?

Input and entry measures

Entry qualifications and background characteristics

Differences across the sector

Measures I

Affective

- Transition experience
- Self efficacy
- Well-being
- Disposition to learning
- Confidence
- Resilience
- Satisfaction

Measures II

Behavioural

- Student engagement
- Placements/ work-based learning
- Employability experiences
- Co-curricular activities
- Skills self-assessment
- VLE engagement
- Learner analytics

Measures III

Cognitive

- General cognitive gain
- Disciplinary cognitive gain
- Critical Reasoning Skills
- Situational judgement
- Research methods

Output and outcome measures

What have your students gained?

Grades, progression

Employability skills

    Affective

    Behavioural

    Cognitive

Other outcome measures

Back to purposes…

Is it critical thinking, generic graduate skills, disciplinary mastery, developing employability or something more holistic?

Context matters

Different measures for different:

  students
  subjects
  institutions

Different measures for:

  general affective/behavioural/cognitive gain
  disciplinary affective/behavioural/cognitive gain
  employability (versus employment)

How define success or excellence?

Evaluating Learning Gain Measures

- development of measures of learning gain

- robustness and effectiveness

- suitability

- scalability

Uses of learning gain metrics

- Personalised approaches to learning
  - Learning analytics
- Pedagogy and curriculum design
- Institutional enhancement
- External engagement

- Student qualifications
- Quality assessment
- Teaching excellence
- Evaluation

Learning analytics

Learning analytics: refers to the measurement, collection, analysis and reporting of data about the progress of learners and the contexts in which learning takes place. (Jisc)

Descriptive → Diagnostic → Predictive → Prescriptive

- Improve teaching and learning
- Contribute to student success
- Design interventions & support
- Predict student outcomes
- Evidence-based 'nudge' behaviours
- Marketing, admissions

How can Learning Gain data help [institutions, academic and professional staff] know and support their students?

How are key processes measured and linked to outcomes?

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