

Assessment Under Pressure: How Cohort Growth Shaped Pedagogical Innovation

O.J. Bakker, O. Allegre, D. Clery, A. Kennaugh and C. Imediegwu

Email: OttoJan.Bakker@manchester.ac.uk

Agenda

- ▶ problem
- ▶ evidence
- ▶ response
- ▶ reflection
- ▶ transferable insight

Why this matters

► Assessment under pressure is a shared challenge



Growing cohorts



Time pressure



Fairness



Feedback expectations

Local context

Large cohort



Open-ended design work



Group-based assessment



Assessment pressure



Linear drive, example of design synthesis, from 'Creative Commons'.



Examples of standard design elements, from 'Creative Commons'.

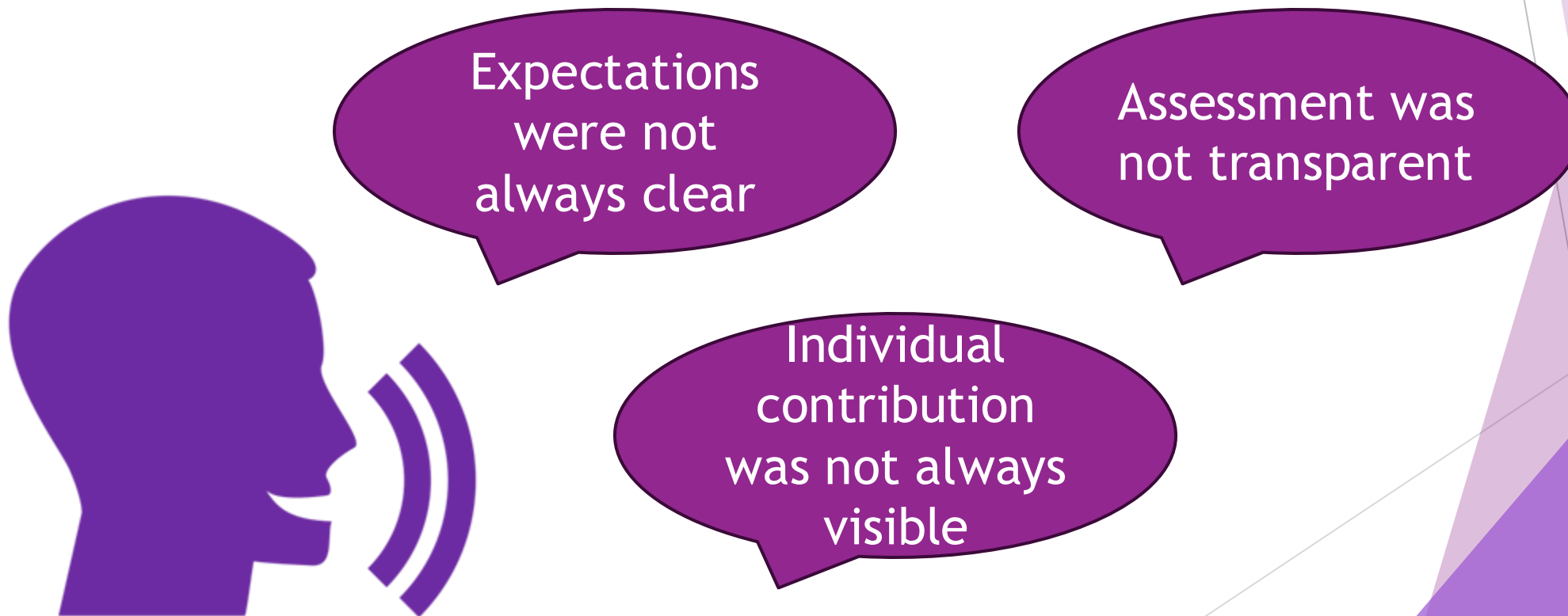
What Stopped Working

Scale exposed weaknesses in the assessment model

- ▶ unclear expectations
- ▶ uneven contribution
- ▶ marking workload
- ▶ perceived fairness

Student experience as driver

Student experience highlighted the problem

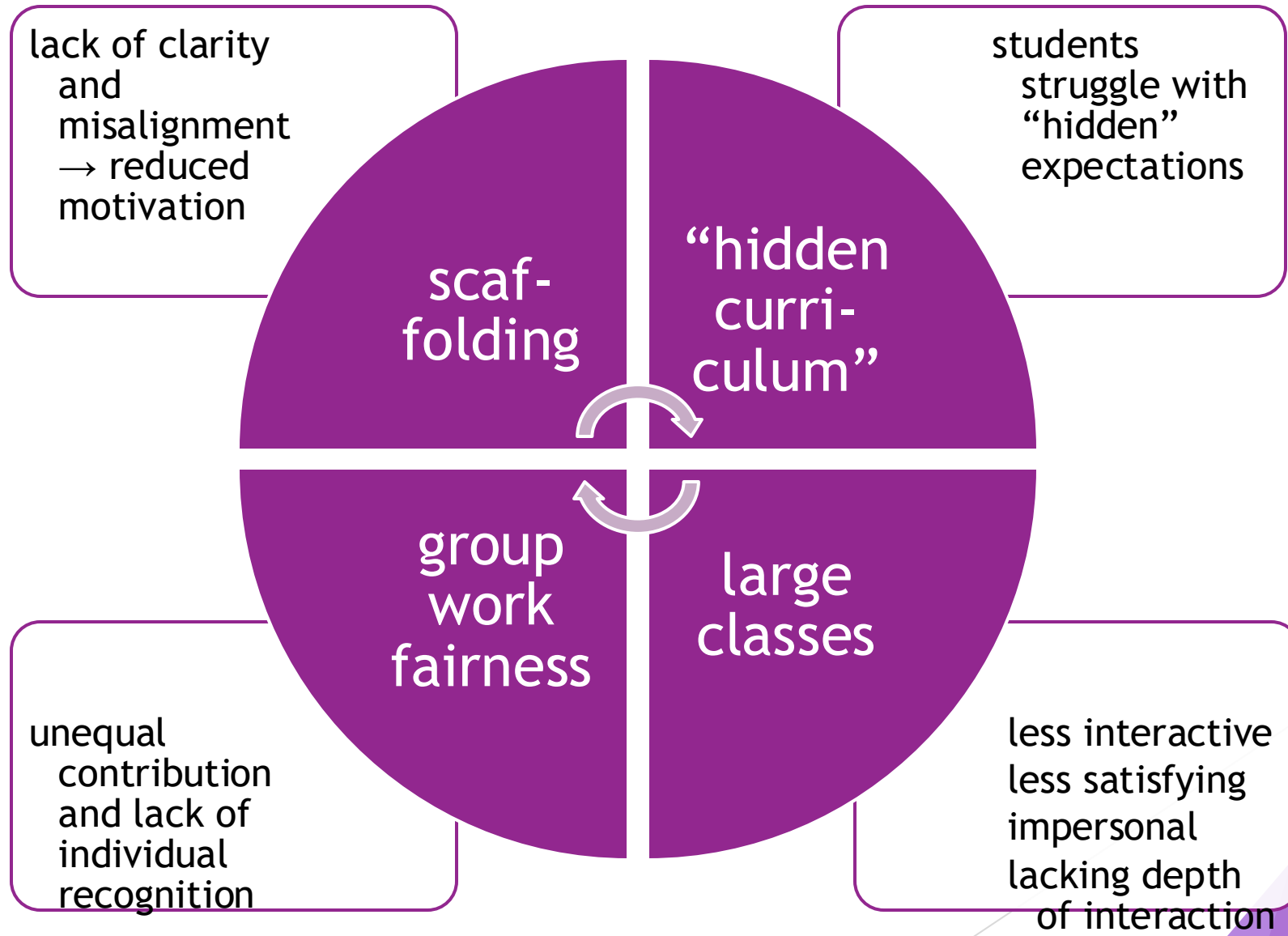


Root cause analysis

Applied pedagogical concepts

- ▶ Underpinning this problem based learning are the following concepts:
 - ▶ Progressive Disclosure
 - ▶ Just-in-Time Teaching (JiTT)
 - ▶ Scaffolding
- ▶ All three approaches derive from Lev Vygotsky's concept called the *Zone of Proximal Development (ZPD)*.
 - ▶ students are challenged but supported
 - ▶ content is introduced at the point of readiness
 - ▶ Timing (when to teach), sequencing (what to reveal) and support (how to guide)

Alignment with scholarly observations



The constraints

We could not optimise everything at once

- ⚖️ Accreditation criteria
- ⚖️ Individual achievement
- ⚖️ Scalable marking
- ⚖️ University Regulations
- ⚖️ Collaborative design learning

The response

The redesign was guided by three principles

Principle	Design response
Scalability	more manageable assessment structure
Transparency	clearer criteria and expectations
Individual accountability	individual numerical assessment

From

- ▶ Interim design report assessing engineering analysis
- ▶ final report assessing embodiment / construction and detail design
- ▶ 2D CAD Drawings (individual)

To

- ▶ Mid term test assessing engineering analysis
- ▶ final report assessing embodiment / construction and detail design

What improved

Table: Summary of the main changes experienced by students and staff.

Before	After
Implicit expectations	clearer criteria
Opaque process	more transparent structure
uneven contribution	stronger individual accountability

What did not disappear

The ongoing work and **balancing**

- ▶ Individual learning ↔ Group learning
- ▶ Authenticity ↔ Standardisation
- ▶ Feedback quality ↔ Marking workload

Key takeaways

- ▶ A pedagogically sound approach becomes **perceived as opaque, unfair, and frustrating when scaled**
- ▶ Assessment must be designed for scale, not adapted to it
 - ▶ The transferable lesson is not the specific assessment format, but the process of rebalancing under constraint.
 - ▶ Iterative
 - ▶ Student-centred
 - ▶ Balanced
 - ▶ Designed for scale