

Partner Enabled Learning from Manchester to the World

1. What?
2. Why?
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4. Does it work?
5. Who?
6. What next?
7. Why are we telling you this?

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These slides on figshare.manchester.ac.uk

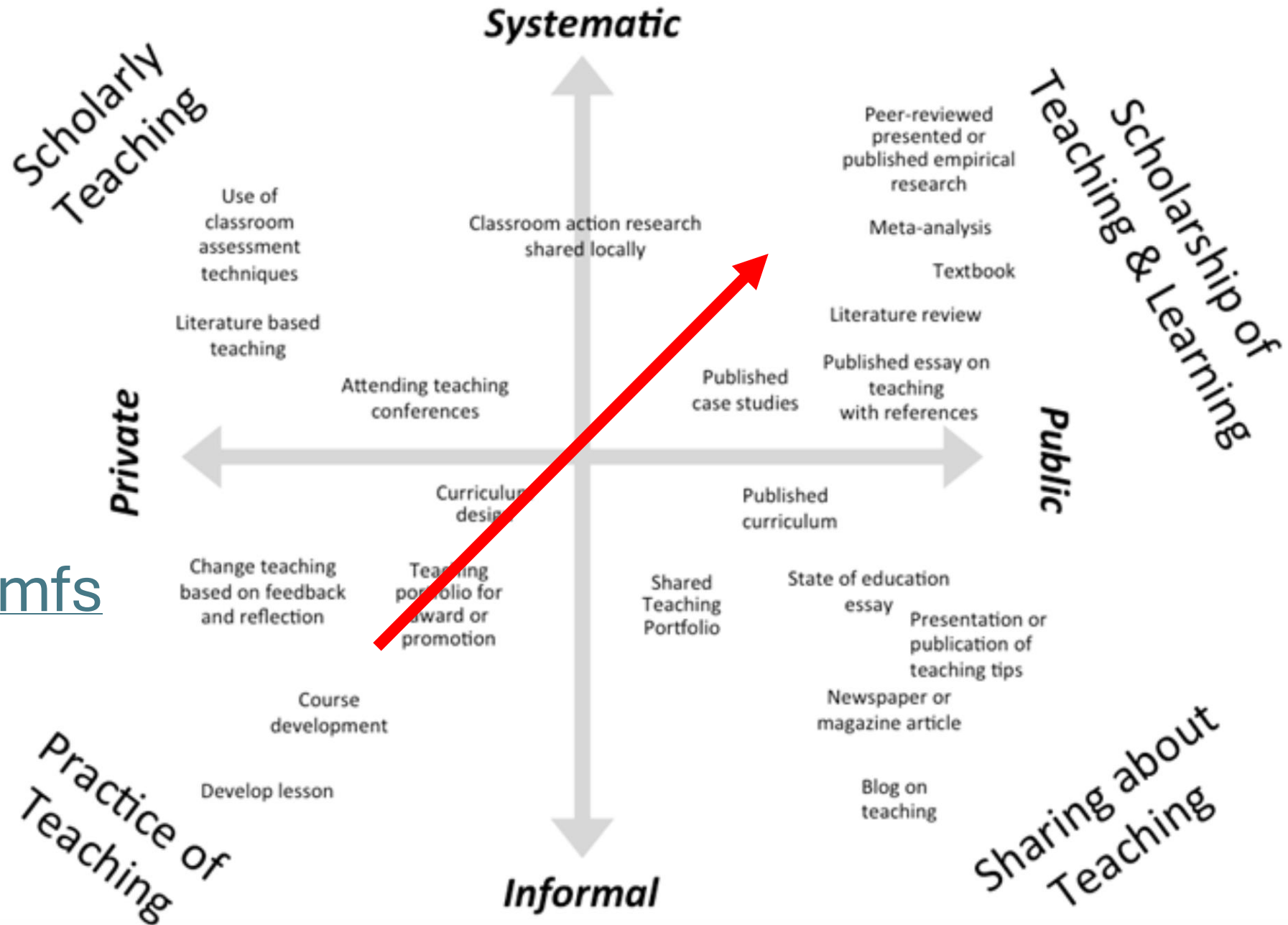
Introduction: What is it?

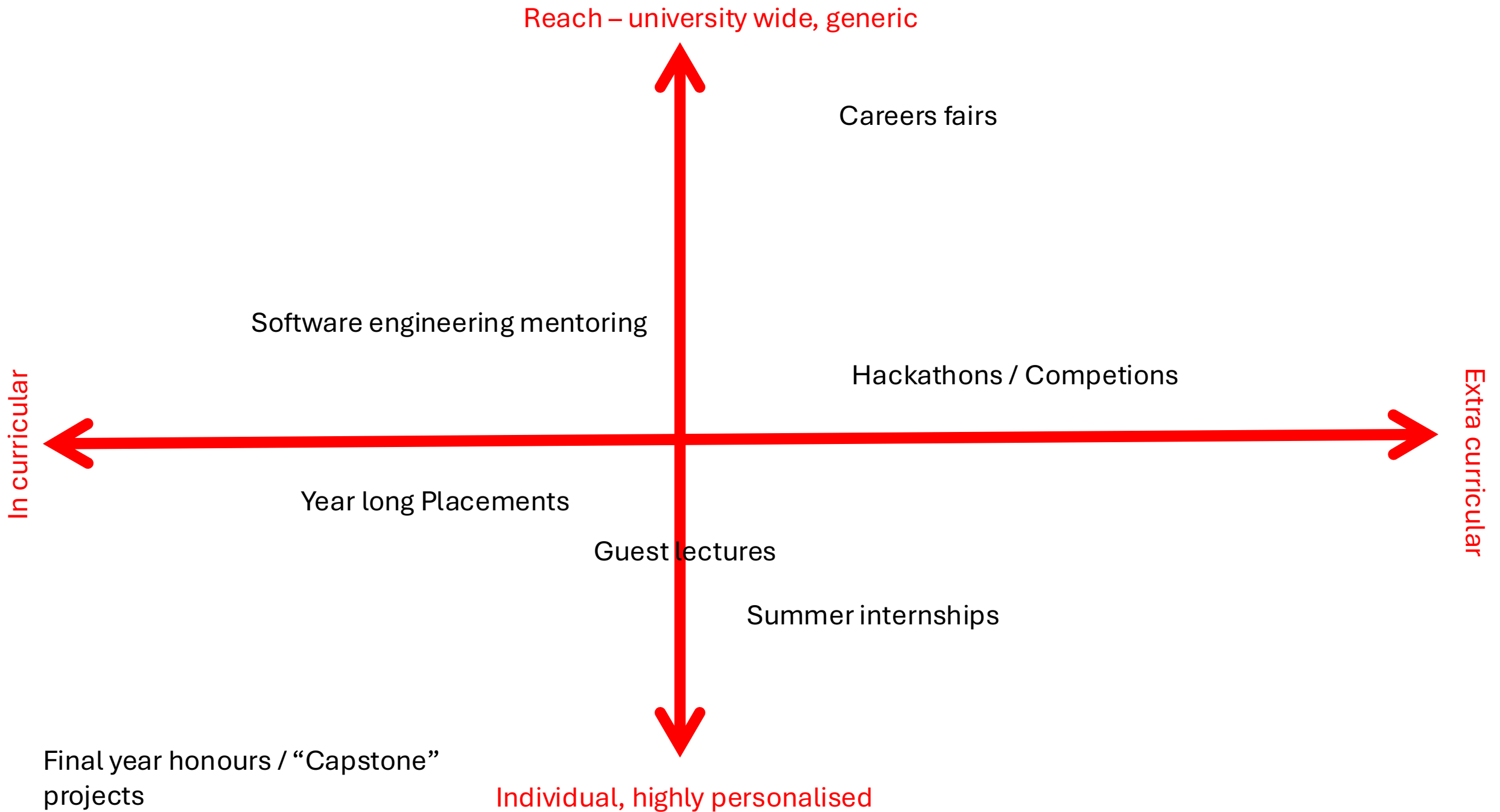
- Teaching practical software engineering (2nd year)
 - **engineering** not coding
 - 250 to 500 students per year ~50 **teams** of ~6
- Industrial **mentors** (not customers)
 - “From Manchester...” industry-club.cs.manchester.ac.uk/manchester.html
 - “...to the World”: Microsoft, Google, Amazon, Meta, Apple
- Large projects stendhalgame.org / “Eventlite”
 - 10+ years
 - Real bugs fixed & real features added

Where does it fit?

- Who else has done this?

D.A.R.T.
model
(2015)
doi.org/qmfs





Why are we doing it?

- Brownfield not Greenfield
- ALL our students to engage with employers
 - Not just recruiters and HR
 - but **EXPERIENCED ENGINEERS !**
- Better software engineers
- Open-ended code review
- Civic engagement

Why are we telling you this?

- Costs involved were justified
 - online
 - More reach, value and impact
 - Extends & enriches curriculum
 - meaningful employer engagement
- Employers (and students) were keen to engage (mostly)
 - Machine learning?
 - But Long live the HUMAN LEARNING mentoring session!
- Un-intended consequences and Learning Outcomes (ULOs)

Ice-breaker questions

- What makes a good commit message or test?
- What code review practices do you use?
 - How does your organisation do this?
- How can we avoid getting into a mess when using Git?
- Teamwork and “Social Loafing” freeloaders & suckers
- industry-club.cs.manchester.ac.uk/mentoring.html
- What is it like and how do I get a job in your organisation?

Unintended Learning Outcomes (ULO's)

- Multiple motivations help you recruit mentors
- Influencing curriculum
- CPD
- Curiosity (or just nosy)
- Giving back
- Recruitment
- PR (public relations not pull request)
- Start small and local and iterate, online is a no-brainer

Does it work? YES

- It scales!
- Engagement improved
 - easier to recruit mentors
 - Students recognise value
- Quality control?
 - qualitative feedback from students was positive

What next? Any Questions?

- Digital Credentials? Badges? 🏆
- Agentic AI as a team member?
 - Rogue & Non-rogue
- More rigorous evaluation?
 - “Students and their employers seemed to like it”

Technical details

Duncan Hull, Suzanne Embury, Thomas Carroll, Ben Possible & Christopher Page
(2026) Improving practical software engineering teaching with industrial mentoring
of
open source team projects
, Proceedings of the 10th Computing Education Practice (CEP '26),
Durham University, Pages 29–32 doi.org/qmmf

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