

Understanding Engagement and Performance of Social Mobility Students

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Outline of Presentation

- Introduction – context
- Motivation
- Preliminary results
- Concluding remarks

WORKING DEFINITION

Widening Participation (WP):

Students who receive a contextual offer.

2020/2021 Offers:

Standard: A*AA (with A in Math)

Contextual: AAB (with A in Math)

2021/2022 Offers:

Standard: A*AA (with A in Math)

Contextual: AAB (with A in Math)

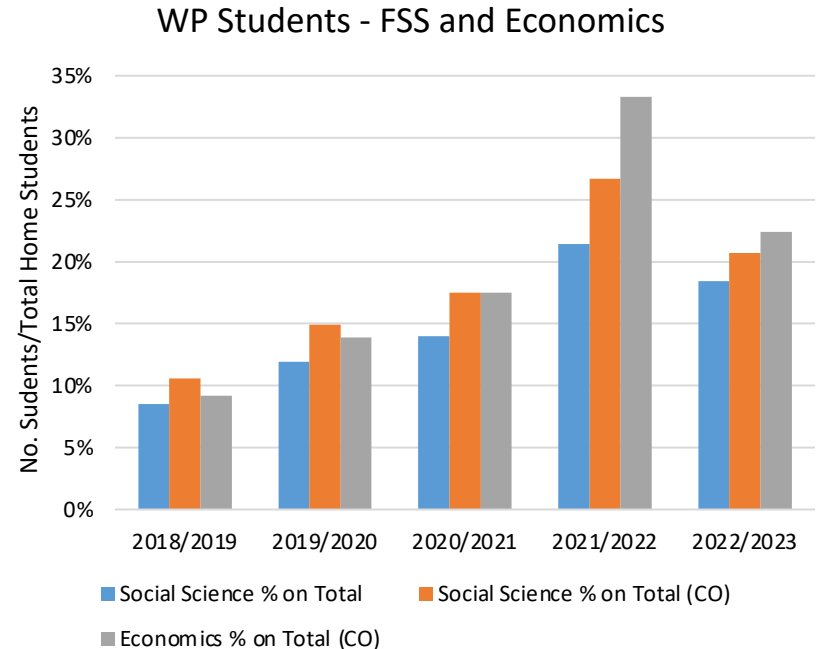
2022/23 Offers:

Standard: A*A*A (with A in Math)

Contextual: AAA (with A in Math)

WP student cohorts: 2018/2019 – 2022/2023

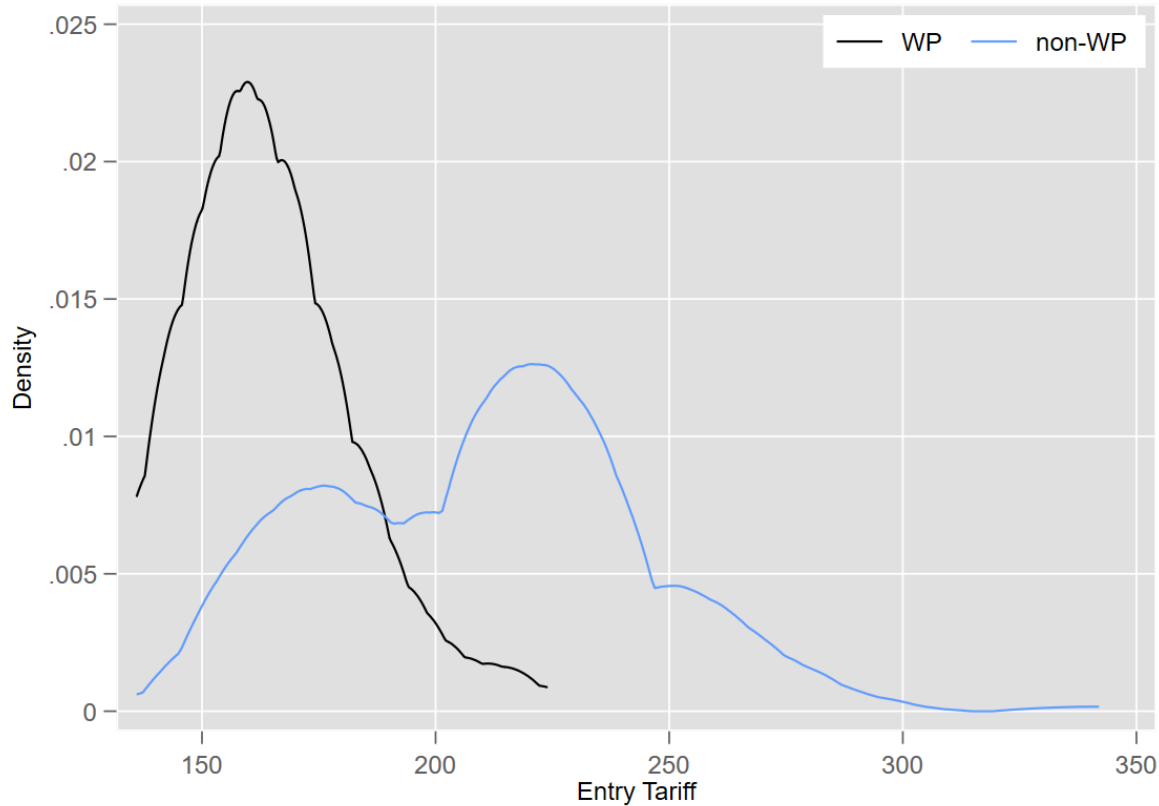
- VLE on students' performance: controversial results (Calafiore and Damianov, 2011 (+); and Chen and Lin, 2012 (+); Moffat and Robinson, 2015 (NS)).
- “Widening participation gap” (see e.g., Hoare and Johnston, 2010; and Chowdry et al., 2013): few studies on impact of VLE on WP performance (e.g., Barile et al., 2022).
- No studies on inclusive assessment (e.g., Tai et al., 2021) and WP students.
- 2021/2022 biggest cohort of WP students.
- Prior findings showing Maths and entry tariffs Relevant for students' performance.



Overview of Preliminary Findings

1. WP performance gap is larger for term assessments than exams (PUZZLE).
2. WP (online) engagement lower - approximately 10%.
3. The WP performance gap is fairly consistent across *all* individual assessments; **including participation grades.**
4. (Non-white) WP students are less likely to (voluntarily) join a study-group in less familiar subjects where term assessment performance is lower.

Covariate Overlap in Entry Tariff: L100



- **Sample size:** 333 domestic (UK and Northern Ireland domicile) students.
- **Students: 117 WP, 216 non-WP**
 - L100: 105 WP, 202 non-WP
 - L116: 9 WP, 8 non-WP
 - LM1D: 3 WP, 6 non-WP

Summary Statistics - WP and non-WP: L100

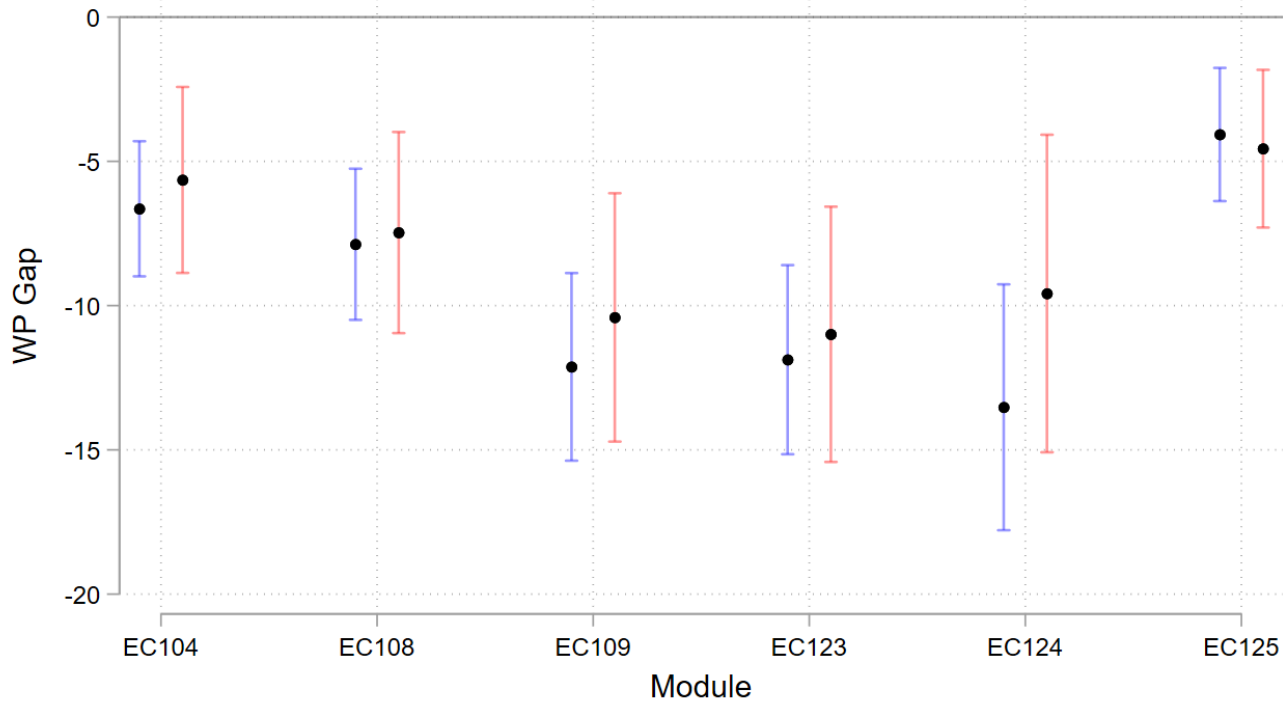
	WP	non-WP	Entry Tariff [150,200]	
			WP	non-WP
Entry Tariff	164	210	167	177
Female	25.5%	21.6%	22.8%	26.9%
Ethnicity				
Asian	39.2%	42.7%	39.2%	35.9%
Black	21.6%	6.5%	19.0%	10.3%
Other	16.7%	8.0%	20.3%	6.4%
White	22.5%	42.7%	21.5%	47.4%
Disability Flag	3.9%	7.0%	2.5%	6.4%
School				
Academy	39.2%	32.2%	39.2%	39.7%
Comprehensive	57.4%	7.0%	58.2%	8.9%
Grammar	2.0%	7.0%	1.3%	3.9%
Independent	0.0%	47.7%	0.0%	39.8%
Sixth Form	1.0%	6.0%	1.3%	7.7%
School Subjects				
Top Math (%)	54.9%	77.9%	64.6%	74.4%
Further Math (%)	18.6%	50.3%	20.3%	20.5%
Economics	88.2%	32.4%	88.6%	85.9%
Observations	102	199	79	78



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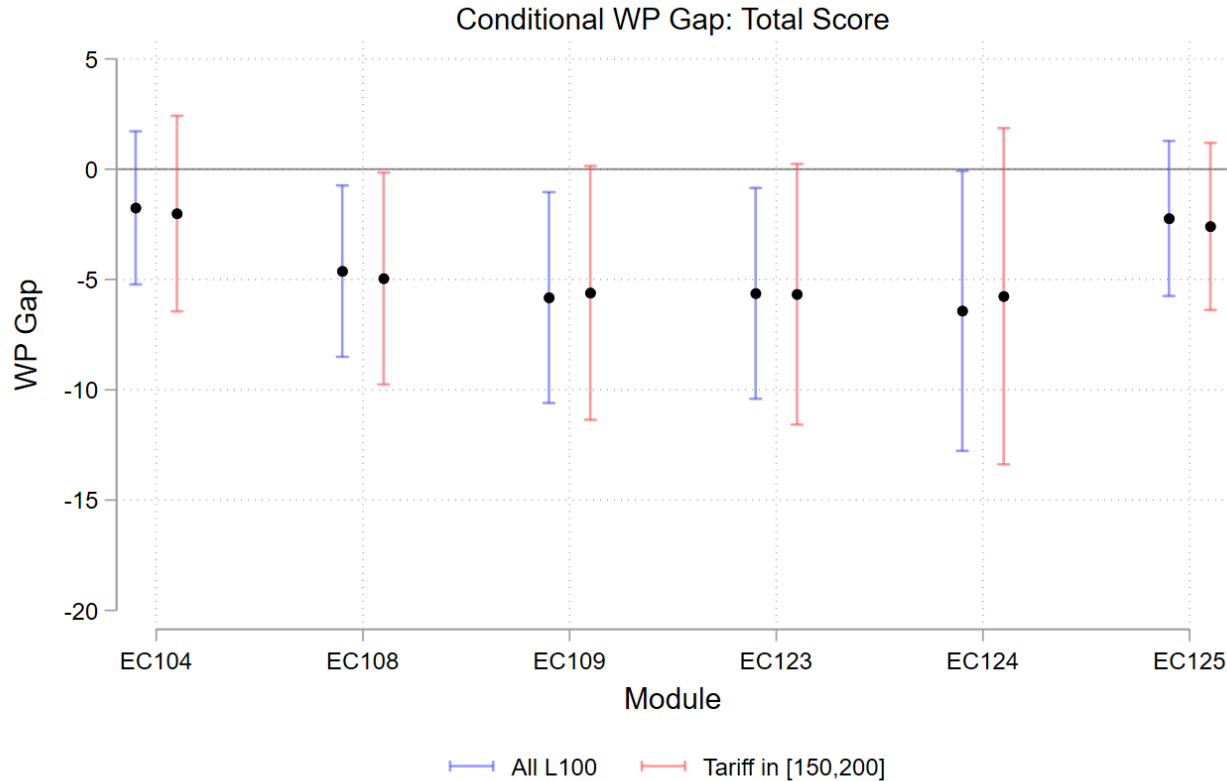
- Finding “common support” is non-trivial.
- Our WP students represent the majority of our state-school students.

Unconditional WP Gap: Total Score



All L100 Tariff in [150,200]

Yes, WP students do significantly worse overall. Even restricting to common support.



But, a large component of this is pre-university characteristics.

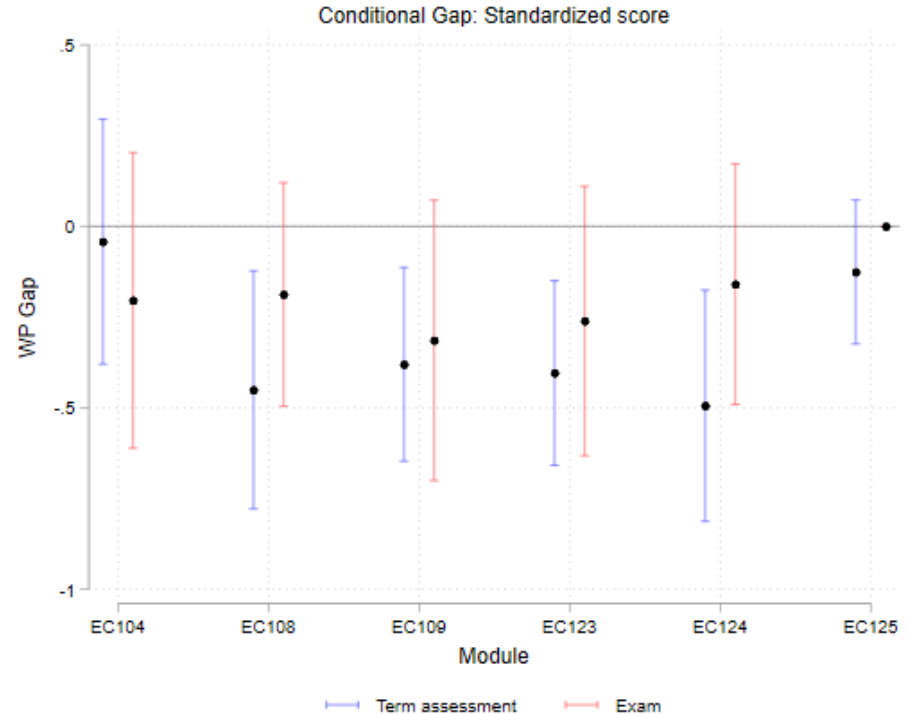
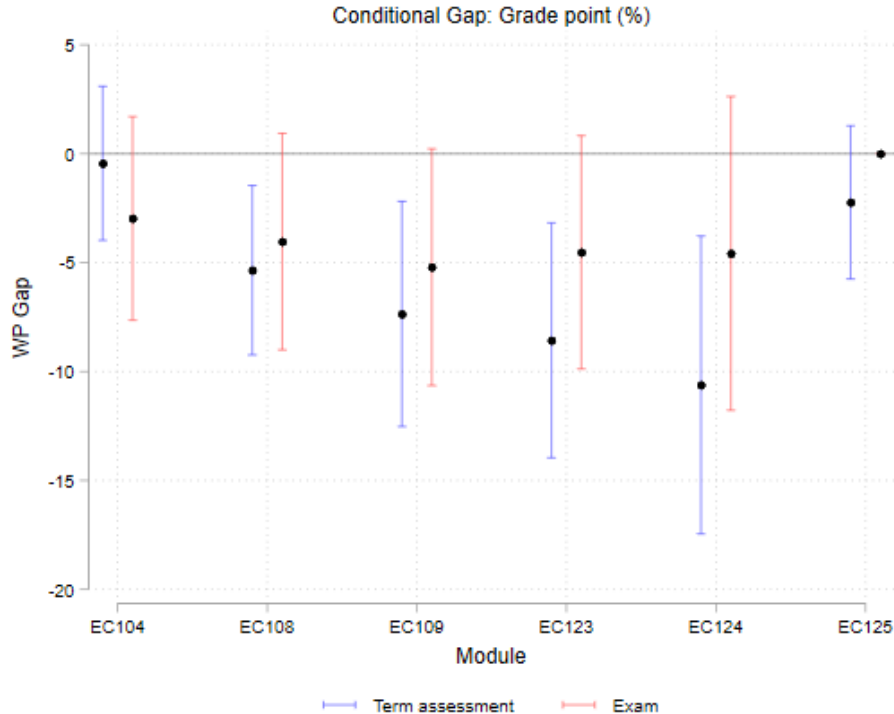
- Entry tariff and
- A* in Math

are the most important!

And the gap is worse for in-term assessments than exams.

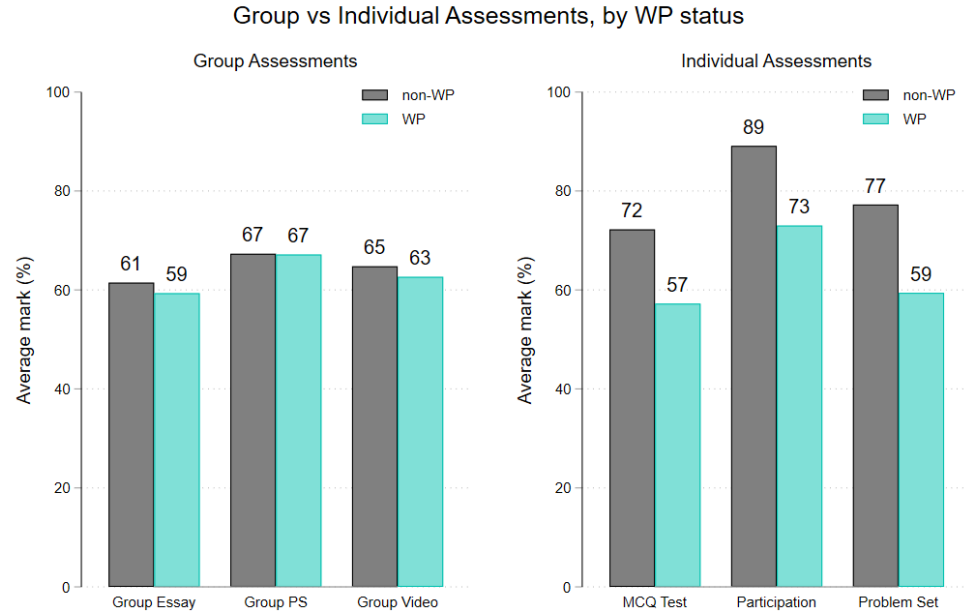
- Higher adjustment costs, catch-up, or absence of group/peer support.

Conditional WP Gap: Term and Exam



Group assessment tends to equalize performance across important demographics, while individual assessments reveal important performance gaps.

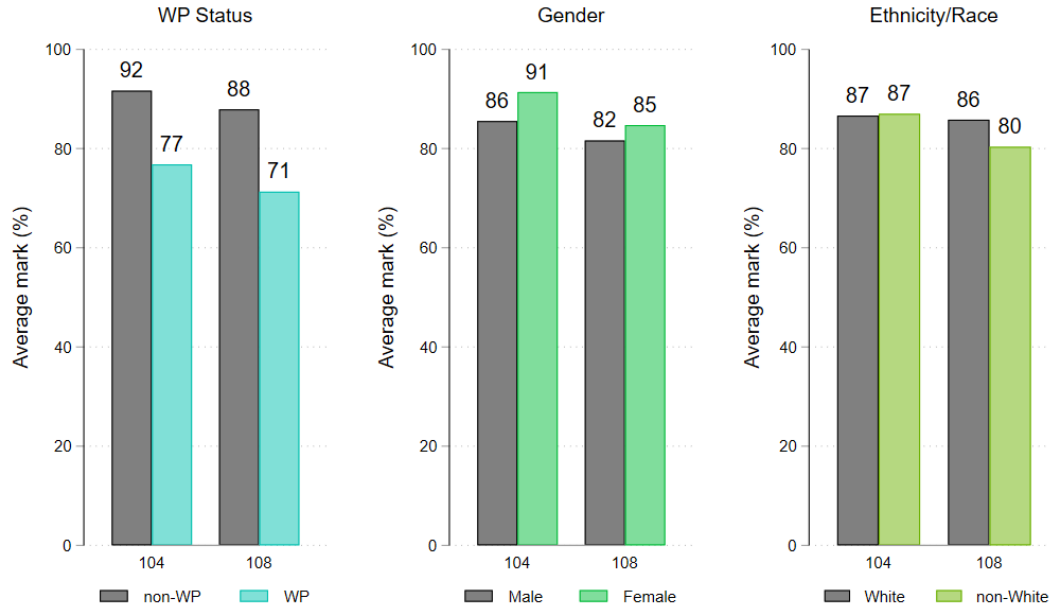
For WP students, this difference is stark.



Includes only core modules.

What is particularly concerning, is the **WP gap in participation** grades among select modules. These should be relatively “easy” credits.

Participation Grades, by EC-module and demographics



Includes only core modules.

AND students who participation scores is positively correlated with lower seminar attendance.

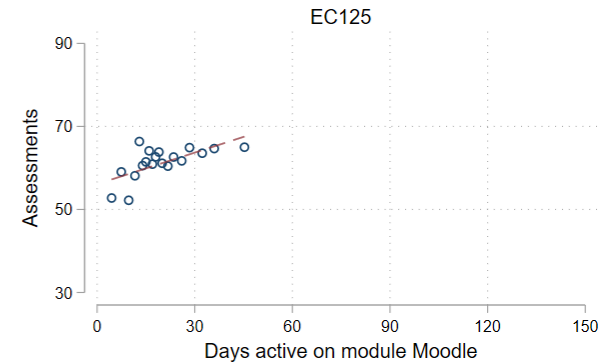
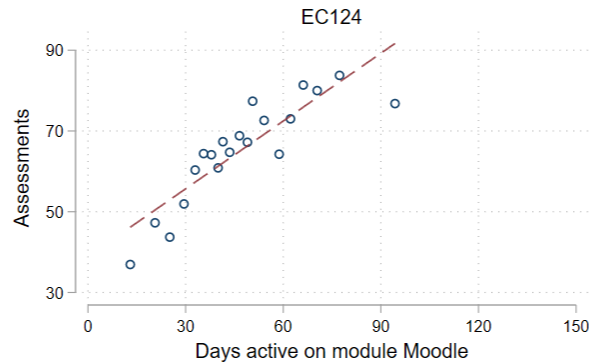
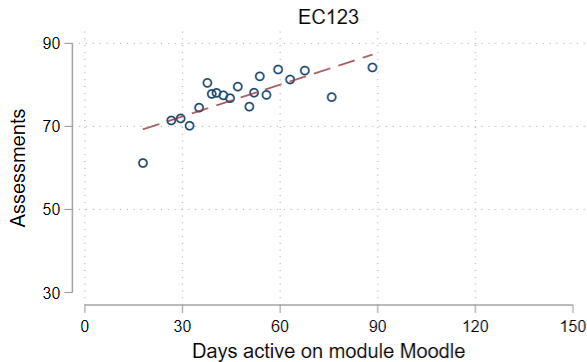
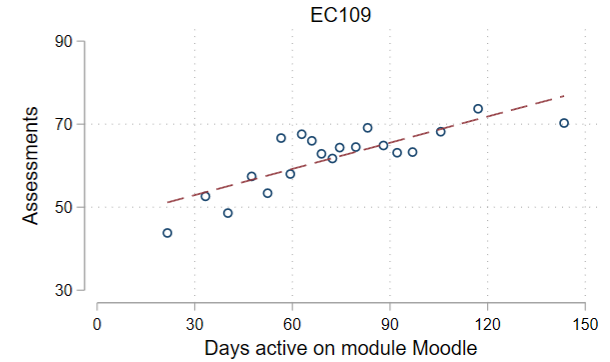
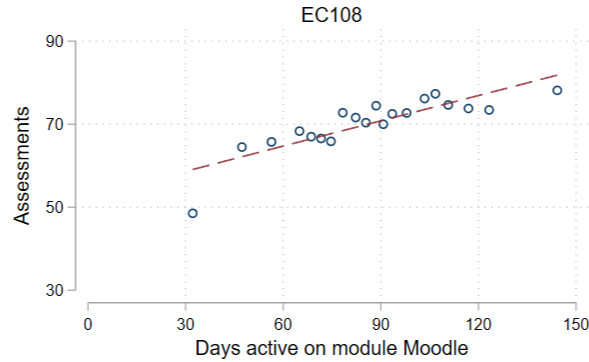
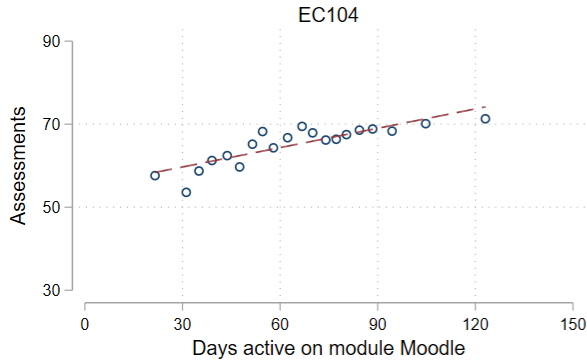
Need more qualitative evidence.

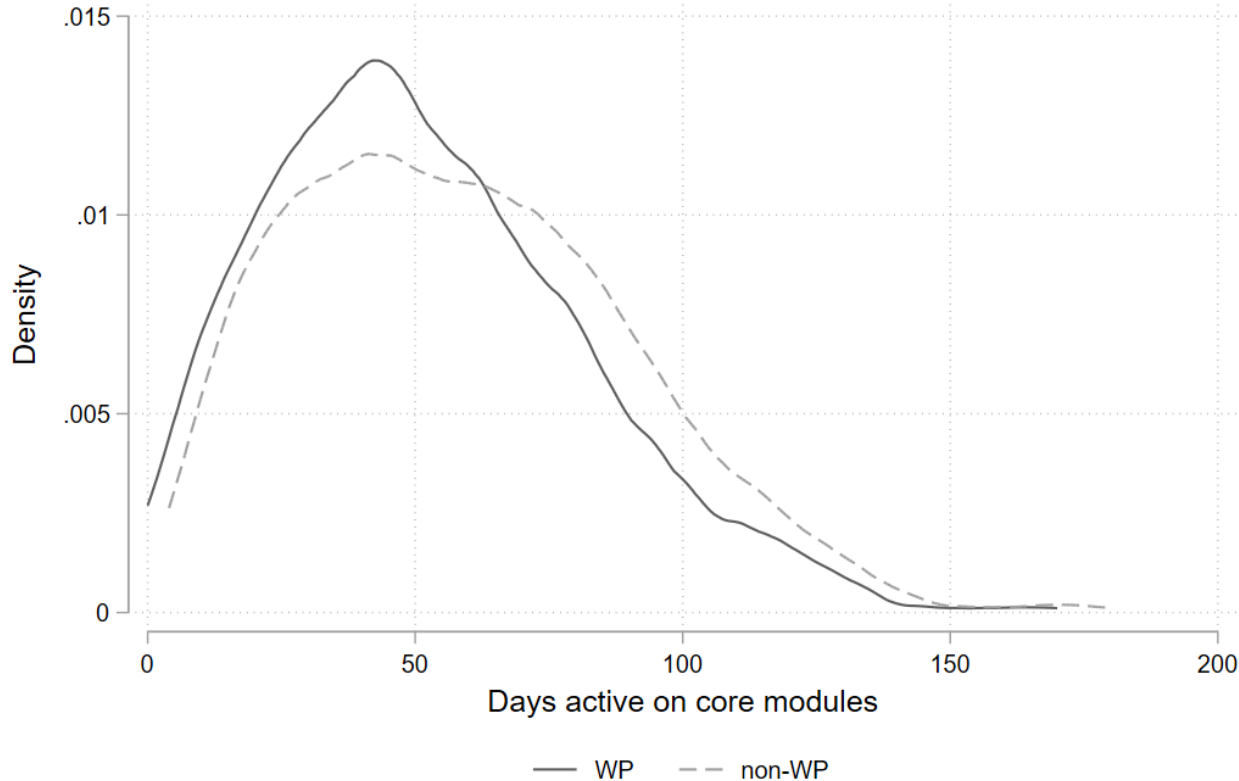
What does qualitative data suggest us?

- Lack of belonging (big modules can increase distance and isolation).
- Some students felt under-represented/ unable to make friends/ difficult to work with others.
- Transition to University is a big challenge.

What **quantitative evidence** we have, shows that engagement with learning material is a strong predictor of academic performance.

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And WP students are less 'engaged' with online resources over the academic year, by approximately 10%.

However, engagement DOES NOT explain all that much of the remaining WP differential.

Conclusions: Part 1

1. WP performance gap is larger for term assessments than exams.
2. Lower academic performance – even conditional on entry tariff – seen across a range of individual assessments.
3. Weak link to engagement; partly through participation grades.

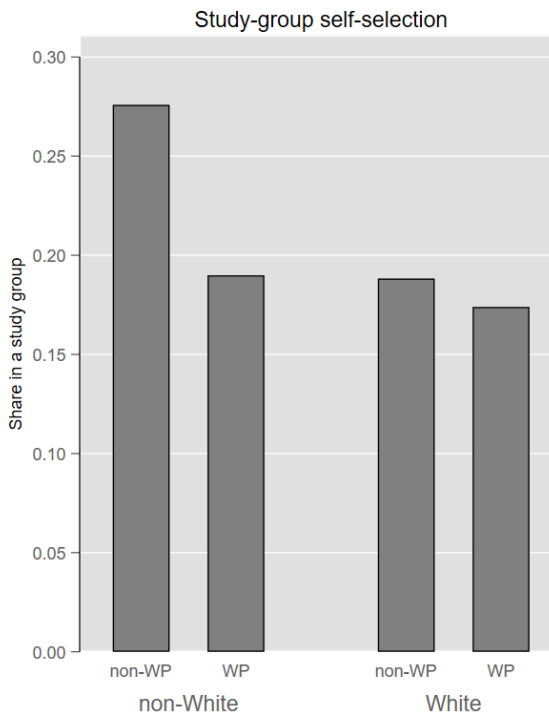
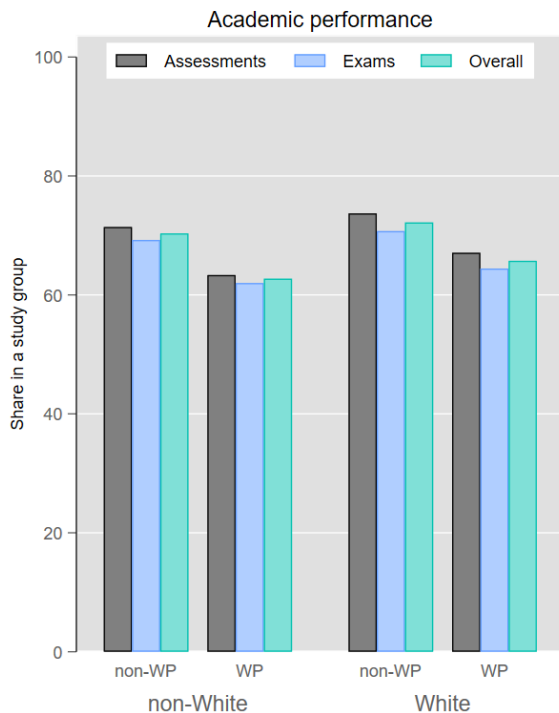
Suggests other – potentially social - barriers to learning *during the term*.

What does *voluntary* study-group formation tell us about the social connectedness of our (non-)WP students?



Macroeconomics is the closest to A-level Economics (taken by 88% of WP students).

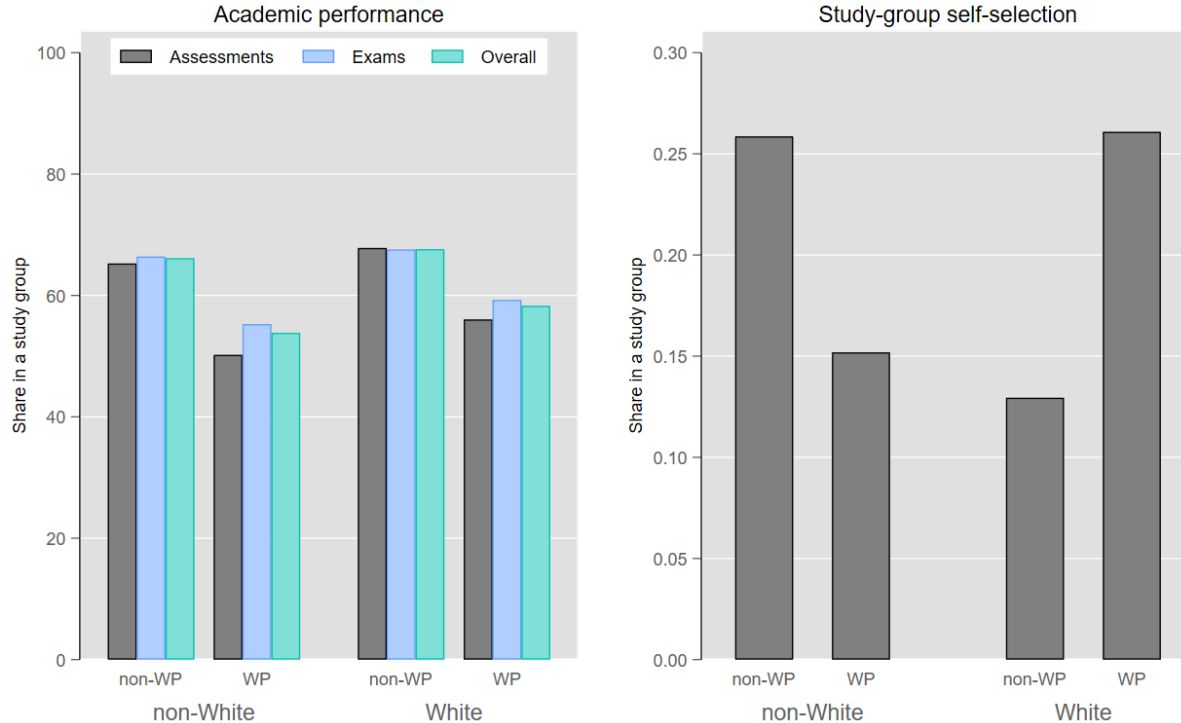
EC108: Macroeconomics (All year)



- Baseline for study-group preference.
- Term assessment higher than final exams.

In contrast, Microeconomics is largely new and highly technical.

EC109: Microeconomics (All year)

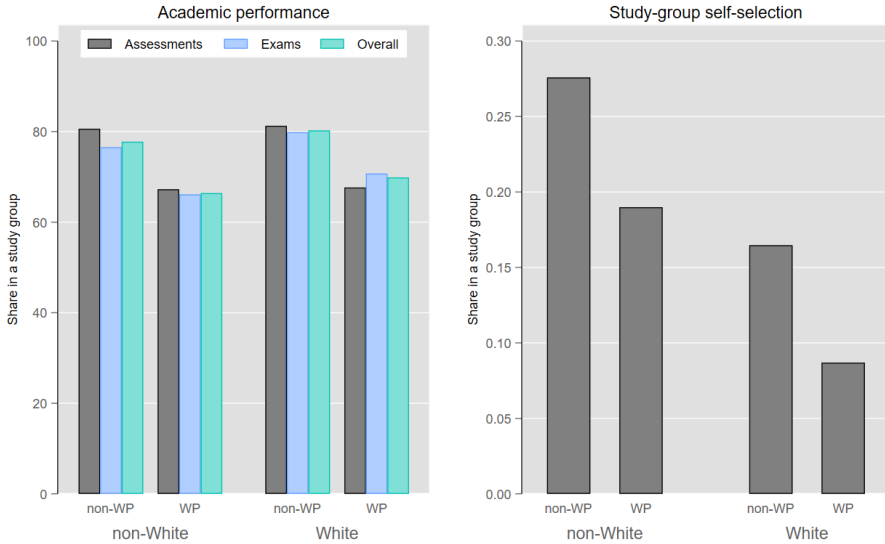


- Difference between term assessment and final exams.
- More “catch-up” for non-white students.
- Relative to Macro,
 - non-white WP participation goes down,
 - white WP participation goes up.

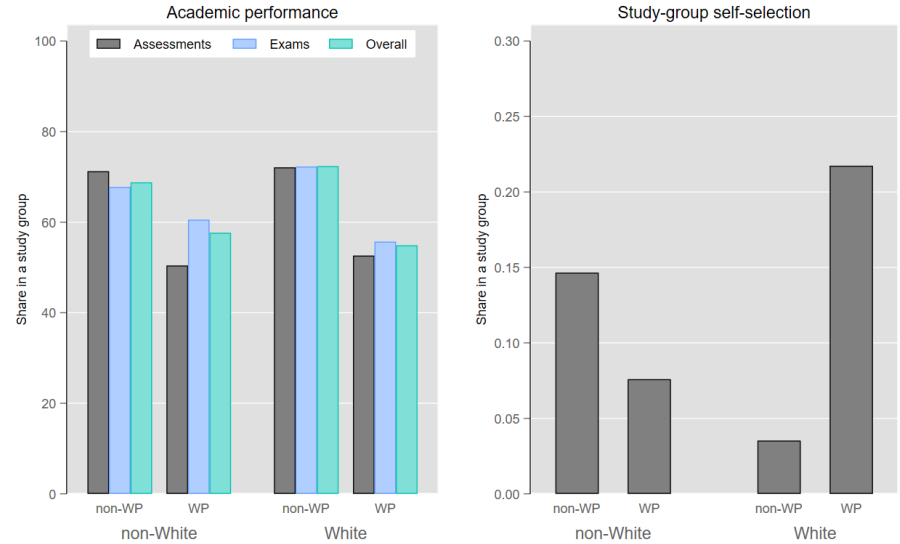
A similar pattern emerges with Mathematics (**familiar content**) and Statistics (**unfamiliar content**).



EC123: Mathematics (Term 1)



EC124: Statistics (Term 2)



Study groups: conclusions and next steps

1. Results suggest take up of study groups may vary by socio-economic status (i.e. WP) and racial/ethnic background.
2. AND there may be heterogeneous responses to unfamiliar (i.e. 'more challenging') content.
3. Wish to compare with international students.
4. Wish to look at composition of groups.

For reflection...

Think about how participation **might be “othering”**?

Is there a deficit of **collegiality** amongst top academic students from high social economic backgrounds?

"Belonging is being accepted and invited to participate; being part of something and having the opportunity to show up as yourself..."

"Belonging happens when people feel safe, seen and accepted."

BELONGING VS OTHERING

"Othering, by contrast, is treating people from another group as essentially different from and generally inferior to the group you belong to"

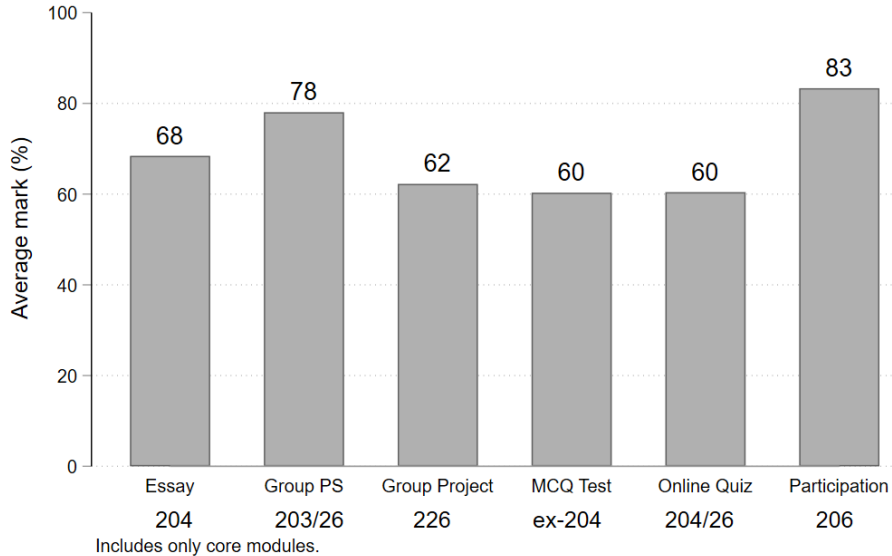
"The moment of participation is sometimes where othering shows up, in both subtle and explicit ways"

Thank You!

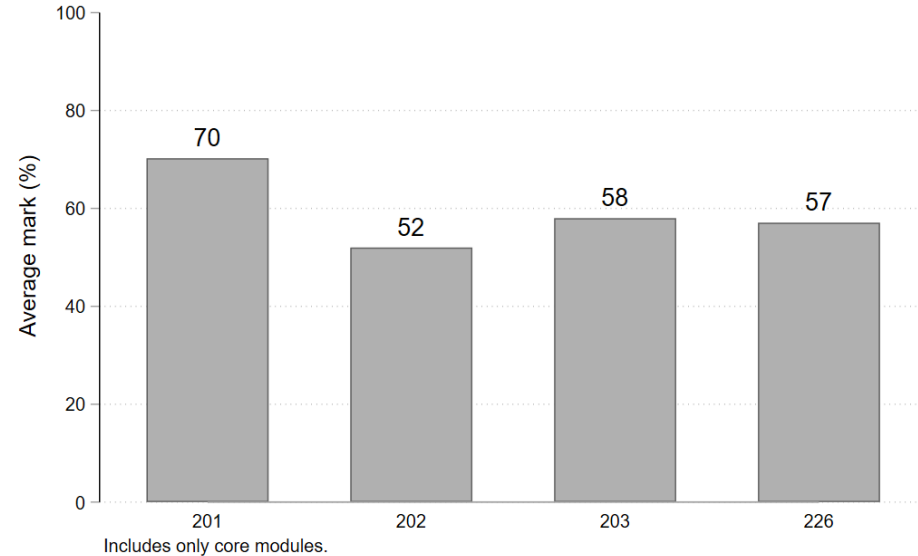
APPENDIX

Student performance varies **by type of assessment** (left) and **by module** within any type of assessment (right)

Year 2: Assessment averages by EC-module and assessment type



Year 2: MCQ test performance by EC-module

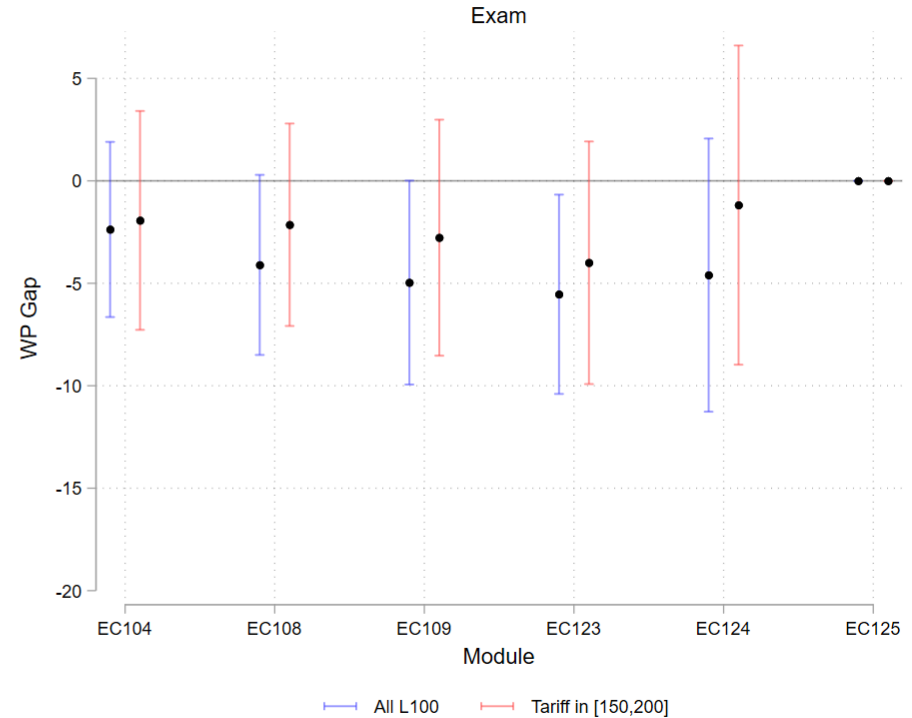
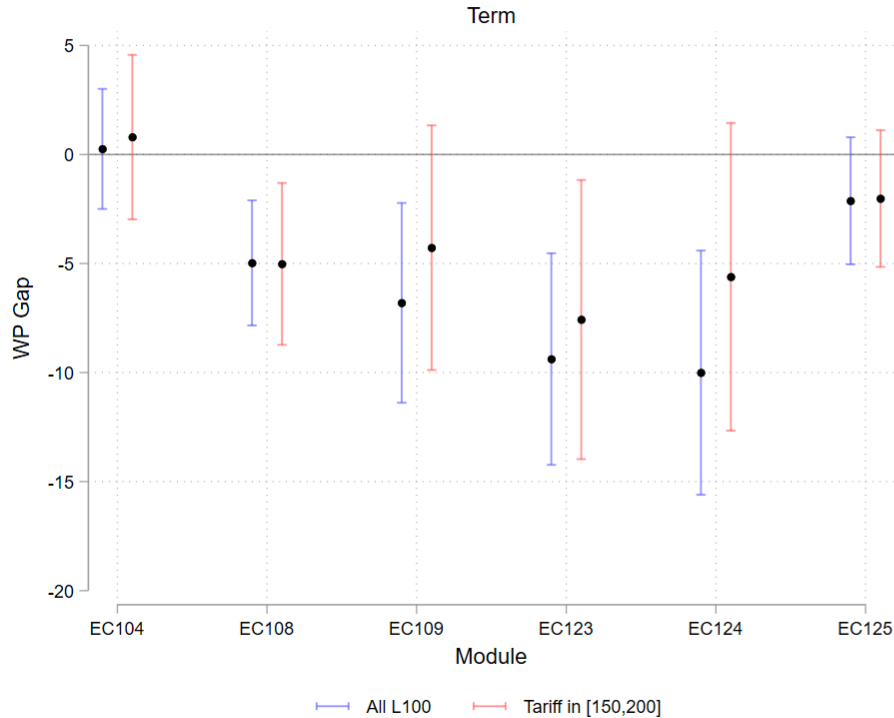


As student composition is *largely* balanced, these differences are not explained by student differences.

However, Moodle engagement doesn't explain all that much of the remaining WP gap.

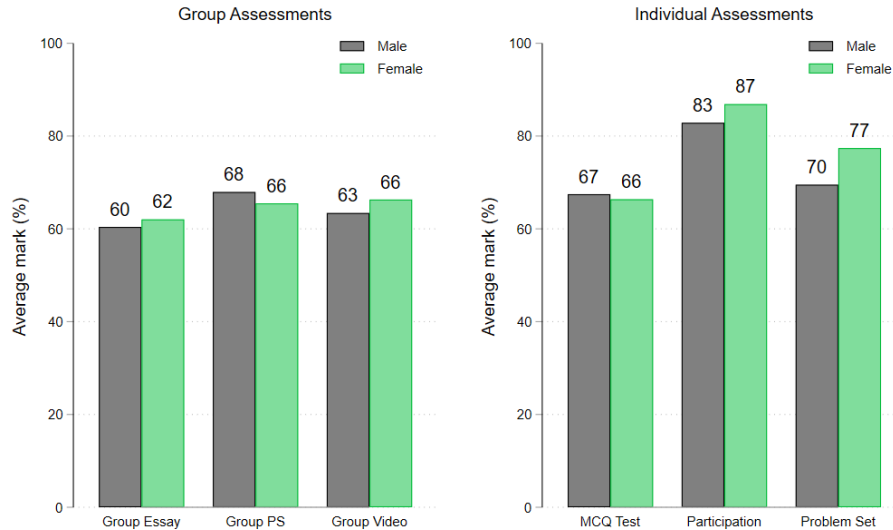


WP Gap: Conditional on Moodle Engagement

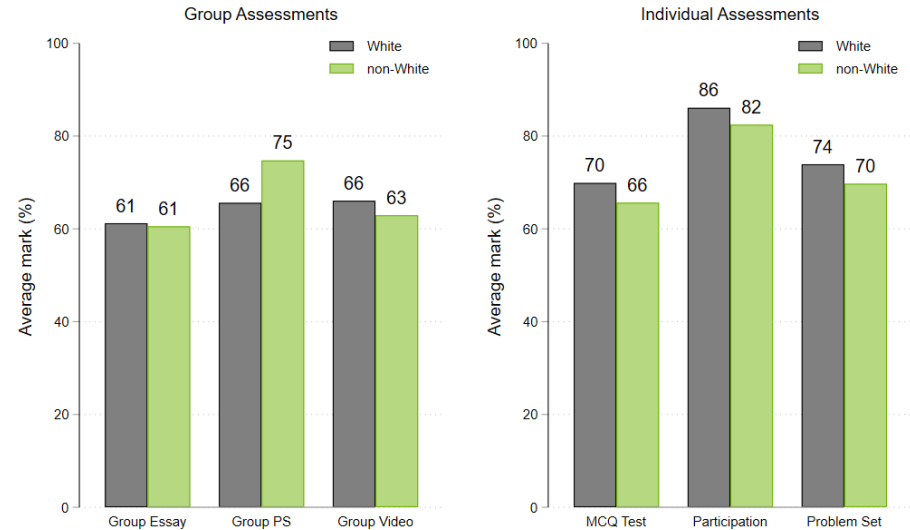


Group assessment tends to equalize performance across important demographics, while individual assessments reveal important performance gaps.

Group vs Individual Assessments, by Gender



Group vs Individual Assessments, by Ethnicity



Includes only core modules.

Includes only core modules.