

## **Commentary to accompany Powerpoint slides from talk at eSTEEeM conference May 2022**

*Black student experience and outcomes on S112: improving a level 1 STEM module aka Closing the awarding gap: listening to our Black students*

### Slide 1

I expect you know about the awarding gap between Black and White students' outcomes at the OU.

*Black student experience and outcomes on S112: improving a level 1 STEM module* is an eSTEEeM project started in late 2020. Louise MacBrayne and Jennie Bellamy are co-leads with Elaine McPherson and Angela Richards making up the team.

### Slide 2

S112 Science concepts and practice is an interdisciplinary level 1 60-credit science module that attracts students from many different qualifications.

Data suggests that Black students on S112, are less likely to complete all the assessments and less likely to pass than their White peers. There are relatively few Black students on S112, typically between 25 and 30 each year out of about 2000.

The awarding gap between Black students and White students for pass rates was at least 15% for the first three presentations of the module, but narrowed for 20J. More on that in a minute.

### Slide 3

Here are the project aims....

### Slide 4

So, next we asked:

What are the needs of Black students on S112 and barriers to their study?  
and

What could be influencing the experience and outcomes for Black students?

### Slide 5

We welcomed Black Associate Lecturer Angela Richards to the project team. As Angela says 'the voice of African-Caribbean students who have an interest in science can somehow get lost if it is not encouraged'.

### Slide 6

Angela is running focus groups with current and former S112 Black students, some quotes are on the slide, including

'if I see I'm not represented in [ ] science, in terms of the professional aspect, my community – because I'm Caribbean – why would I want to continue into that field, its clearly not a place for Black people''

Yes, they said 'It's clearly not a place for Black people'

And

“the experiment, it assumed that you had certain things in your house...it assumed that you had everything in your house and they don’t support you”. So a mention there of money and resources.

Slide 7

A thematic analysis of the transcripts found the key themes were: lack of representation of Black people in module materials; financial barriers like needing to purchase items for practical work; and a lack of sense of belonging for our Black students.

Slide 8

We are also carrying out an intersectional study to investigate whether our Black students face a double disadvantage. This uses scores from students’ assessment, and factors like where they live and whether they are the first in their family to go to university. We have four years of data, some of it is quite shocking.

Slide 9

The charts plot:

average pass rates for ethnic groups: that’s the red circles;

average pass rates for postcodes as green triangles: IMD1 is the most deprived 20% of postcodes in the UK, so the poorest; IMD5 is the least disadvantaged, so wealthiest;

and the pass rate for the students at the intersection of those groups as the yellow cross.

Slide 10

This is data for the presentation that started in October 2019. Only 16.7% of the Black students in IMD1, the poorest areas, passed the module in 19J compared to 60% of White students in IMD1, and over 70% of White students in IMD5. The average score for all Black students that year was 44%. Even though numbers of students in the intersectional groups are often small the ones with the large double disadvantage are often Black. The fact that it’s the Black students in IMD1 with the intersectional double disadvantage links to the focus group quote about assumptions about owning or buying equipment for kitchen experiments. About 38% of the OU’s Black students live in IMD1 postcodes, compared to about 17% of our White students.

Slide 11

There is a similar pattern for the presentation starting in October 2018.

Slide 12

We found no consistent pattern for Black students who are first in their family to go to university being doubly disadvantaged,

Slide 13

And nor did we find a consistent double disadvantage for students of a particular gender.

Slide 14

The lack of double disadvantage for First in family students might indicate that S112 makes fewer assumptions about prior understanding and experiences (the so-called hidden curriculum) than some areas of the university’s offering. We hope next to investigate other intersections including students with caring responsibilities.

## Slide 15

Here's an overview of our data findings

We need to thank eSTeEM's Project Officer, Jonathan Evans, for gathering and plotting the data, Jonathan is someone worth knowing if you have a project like this one.

So, back to that narrowing of the pass rate gap in 20J. In 17J and 18J the exams went ahead as planned face-to-face. In 19J, in the early stages of the pandemic, the exam was written for face-to-face but was delivered online with students completing it remotely. In 20J the exam was designed for online delivery and completed remotely by students. Could that difference in exam design have made a difference to the pass rates? And how does exam design link to the outcomes for IMD1 Black students in particular? The 21J cohort sit their online remote exam soon so we will have another year's data and another focus group is planned too where we hope to have a clearer focus on assessment.

## Slide 16

Discussions are also happening about whether some of the kitchen experiments with costly equipment can be recreated as interactive online experiments giving students a choice of how to approach this aspect of the module. We know that choice brings accessibility and inclusivity.

Lastly a mention of a challenge that we have faced - it has been very difficult finding students willing to join the focus groups. Angela, as a Black AL of Caribbean heritage herself, has done a fantastic job persuading them but we have heard about students unwilling to talk until their module result is released. This raises questions around trust, power imbalance and takes us back to our themes of belonging and lack of representation.

## Slide 17

Thank you for your interest in our project

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