Postcode Inequity: Closing the Awarding Gap for Stage 1 STEM Students residing in our most deprived UK postcodes

eSTEeM Final Report, February 2026

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Executive Summary

At the onset of the project, we identified that gateway (the first module typically taken by students in a qualification) STEM modules in Science (S111 and SDK100) and Environment (U116), have awarding gaps between 10% and over 25% between the most and least deprived UK postcodes, based on the measure of Index of Multiple Deprivation (IMD).

The report summarises findings from our survey and interviews with STEM students who were residing in IMD Q1 (most deprived 20% of UK postcodes) and IMD Q5 (least deprived 20% UK postcodes). We compared the three science modules with two modules from Engineering and Innovation (T192, T193) and one gateway Design module (U101) to consider similarities and differences between student experience across the STEM faculty more widely.

A JISC online survey was distributed to nearly 10,000 students of whom nearly 250 responded. In total 18 students were identified for direct contact based on their survey responses. Seven attended individual interviews which were recorded and transcribed for thematic analysis.

Survey findings indicated that that IMD Q1 students were more likely to be working full-time than those in IMD Q5. Furthermore, IMD Q1 students were more likely to have caring responsibilities than those in IMD Q5.

Key themes identified centred around community, study space, finances, belonging and self-confidence.

Results from a parallel intersectional study for socio-economic status with other characteristics like ethnicity and disability revealed no consistent double disadvantage for either IMD Q1 or IMD Q5 students, although T193 showed consistent double disadvantages across both IMD Q1 and IMD Q5 which warrants further research.

Recommendations focus on increasing visibility of sources of support available to all students, one notable example being increased visibility of the Student Assistance Fund. Many students noted the lack of a private, quiet space in which to study, hence increased visibility (via module VLE sites and tuition) of the SCONUL library access scheme, where our students can use the library facilities of other institutions, is strongly recommended.

Other notable recommendations include increasing the visibility of university staff, especially academic staff, from non-traditional and working-class backgrounds and encourage those staff to be open about their lived experiences. IMD Q1 students in particular had noted a lack of sense of belonging and self-confidence, believing that Higher Education is not a place for them.

Aims and scope of the project

Background

The UK Government defines deprivation as “people’s unmet needs, a lack of access to opportunities and resources which we might expect in our society.” (Ministry of Housing, 2025). The Index of Multiple Deprivation (IMD) datasets represent a measure of relative deprivation across the four nations of the UK. It is based on postcodes and indicators reflecting seven different factors including crime rates and unemployment. Every postcode is allocated into a group Q1 to Q5 with Q1 being the 20% most deprived areas and Q5 being the 20% least deprived areas.

The STEM faculty has identified the awarding gap between IMD Q1 and IMD Q5 (most and least deprived) UK postcodes as a priority under APS (Access Participation and Success) criteria. We identified that gateway STEM modules in Science (S111 and SDK100) and Environment (U116), have awarding gaps between 10% and over 25% depending on module and presentation (Figure 1).

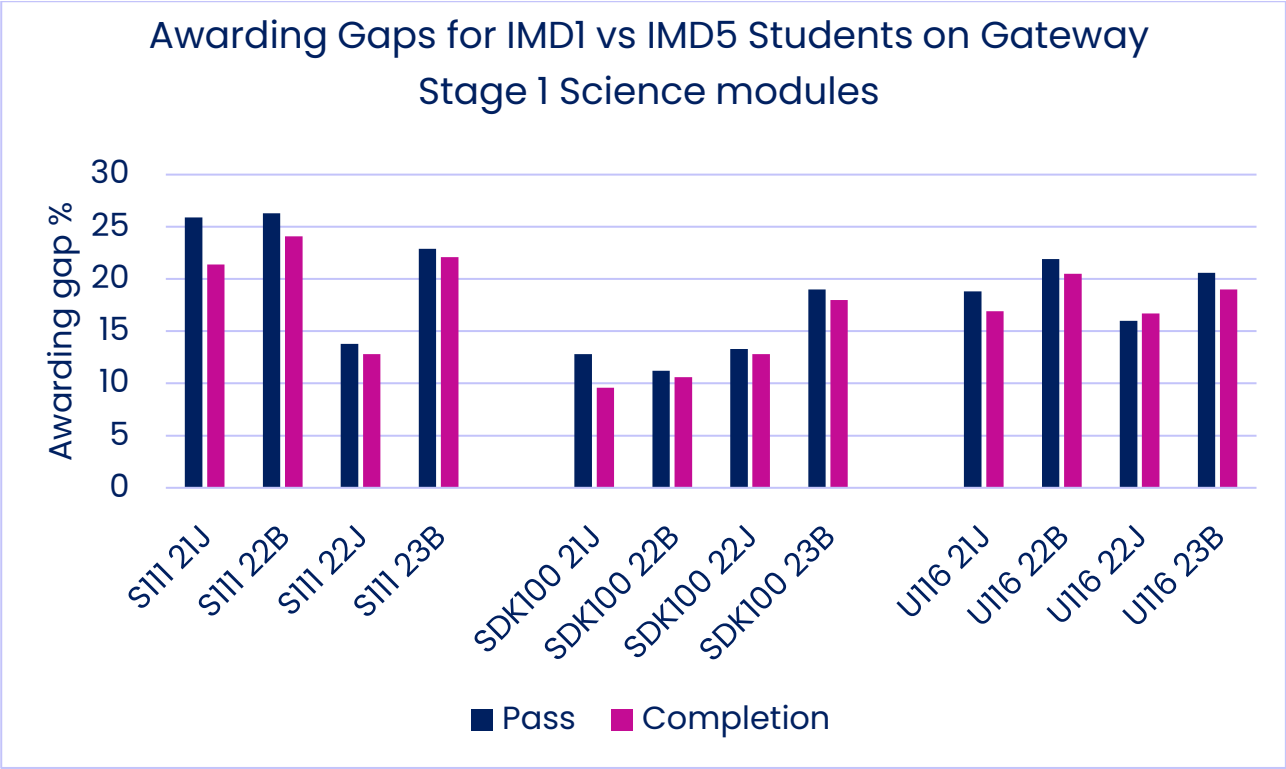

Figure 1 Awarding gaps for IMD1 vs IMD5 students on gateway stage 1 science modules

Previous scholarship (MacBrayne *et al.*, 2024, 2025) investigated another APS highlighted awarding gap for Black students vs White students on S112, another stage one science module (although not a gateway module). Findings from this completed project included themes that may be relevant to all students, including costs associated with study and being time poor. This project proposed to probe further into the APS identified priorities by investigating the factors which could be influencing the current student success awarding gap for students residing in IMD Q1 postcodes vs students residing in IMD Q5 postcodes. It is known that students with other APS identified characteristics (such as Black students) also often reside in IMDQ1 postcodes, plus students in the most deprived areas may more likely be in full time (sometimes multiple)

employment, have additional requirements declared (in particular mental health challenges) and may have other HESA identified characteristics such as caring responsibilities. By targeting students residing in IMD Q1 postcodes, therefore, it was hoped that this project would benefit several APS identified awarding gaps. Consequently, a wider student demographic could benefit, enhancing student success at the very start of their qualification.

At the onset of the project, there was very limited research in this area, particularly part-time distance learning. Initially, we intended to survey IMD Q1 students on the three science modules about their experiences and offer follow-up focus group discussions for those willing to speak direct to the project team to develop a better understanding of the barriers faced by the students (with the same survey questions being sent to IMD Q5 students to enable a direct point of comparison).

However, we set out to compare the three science modules with two modules from Engineering and Innovation (T192, T193) and one gateway Design module (U101) by sending the same survey to students residing in IMD Q1 and IMD Q5 on these wider STEM modules (Table 1) to see if the same issues faced by our Gateway Stage 1 Science modules are more widespread across STEM.

Module code	Module name
S111	Questions in science
SDK100	Science and health
T192	Engineering: origins, methods, context
T193	Engineering: framework, analysis, products
U101	Design thinking
U116	Environment: journeys

Table 1 STEM gateway modules included in the study

All of the modules selected were 60 credits, the exception being T192 and T193. These modules, whilst being 30 credits each, are presented consecutively, meaning that a total of 60 credits is studied within the same presentation timescale as the other modules, hence a direct comparison was possible. Other schools within STEM (such as Computing & Communications and Maths & Stats) do not have 60 credit gateway stage one modules and hence were not considered.

A parallel intersectional study was planned for IMD Q1 and IMD Q5 students with other protected characteristics such as ethnicity and disability. Furthermore, we were particularly interested in those who are studying full time and/or are carers and/or are in full-time or multiple employment.

Literature Review

Participation from a diverse range of students in universities has increased significantly over recent years (Di Miceli, 2024). This has resulted in a very clear awarding gap between different groups of students (Ismail, 2023). There is a dearth of research investigating awarding gaps for Higher Education students by IMD status and socioeconomic status. Both measures are widely used in the health sciences to identify differences in UK outcomes (e.g. Evans et al., 2016; Bush et al., 2022). The issue of participation and the awarding gap has long been a subject of discussion, still Major (2026) brings the discussion back to the table and shows there is still a big problem within the UK system.

Many studies have focused on the awarding gap in relation to Black, Asian and Minority Ethnic students (Seuwou and Adegoke, 2025). While this is an important focus, in this project we have selected students in areas with IMDQ1 status to compare with IMDQ5 status. This will allow us to focus on all students of all ages and ethnicities who are allocated into a deprivation index.

However, quantifying data in this field can be subjective to the group obtaining the results. Hubbard, (2024) details how the metrics and statistical measures we are using may not be ideal for the task. They suggest we need a much deeper understanding of the problems being faced by students and this can be individual and differ greatly from student to student making it difficult to put students in set groups. To overcome these issues we have interviewed students to gain fuller insights into their experiences and obstacles they have overcome.

In many cases the students we have interviewed have detailed multiple issues that affect their studies aligning with Kimberlé Crenshaw's theory of intersectionality (Crenshaw, 1989). Banerjee and Eryilmaz, (2024) examined the so called "degree achievement gap" which separates students into age, ethnicity, disability and gender. They stressed that multiple factors needed to be considered to understand the true picture for each student. They concluded that the awarding gap could be narrowed using strong interventions tailored to the needs of the students. Banerjee, (2024) further details the need for staff to have a range of backgrounds to represent the students' backgrounds. Biases can be reduced by increased formal feedback and allowing staff time to get to know and understand all students better.

There is a link between all of these variables; Brophy, (2025) details the intertwining links of social economic status, sex and ethnicity to try and separate out and clearly see the effect of each one. As our focus in on deprivation there are many ways to analyse this. Other studies have focused on a particular area e.g. digital poverty (e.g. Helsper, 2021) or using proxies for deprivation e.g. free school meals. Politically, right-wing and centre right popular and secondary sources have focussed on the 'left behind' and 'white working classes', in turn these have been viewed as a distraction from the wider inequity picture by the centre-left (e.g. Treloar, 2021).

IMD has been used in many areas (e.g. Lloyd, Norman and McLennan, 2023) as a measure of deprivation and is just beginning to be used as a measure for awarding gaps in Higher Education. For example, Brown, Goss and Sam, (2023)

have used IMD alongside ethnicity data to examine the awarding gap at medical school which will complement this study using a range of courses.

Geodemographics (Webber and Burrows, 2018), the study of people based on where they live, has been criticised for grouping people for analysis when they have little in common, in parallel with other societal groupings, e.g. the now out-dated 'BAME'. However, the use of IMD data is widespread among not-for-profit organisations and think tanks. We have chosen to use this method to get a balanced pictured of all students who may experience some kind of deprivation. Although no single metric is perfect, this best fits our project as we can select people from all backgrounds only based on where they were living at the time of study.

Our work extends the previous work (MacBrayne *et al.*, 2024, 2025) to encapsulate the changing landscapes of universities and help us to inform practices to best support the needs of all our students.

Project Aims

At its onset, the project had four main aims:

- To develop understanding of issues faced by students during their study of gateway stage 1 STEM modules at the start of their OU qualification, who reside in the most deprived postcodes within the four Nations of the UK
- To raise awareness of these issues amongst STEM staff including tutors, tutor and student support staff, and module teams.

- To consider how stage 1 tutors could adapt their tuition practice to respond these students' needs throughout the module presentation as well as to support exam preparation and practice, to lower awarding gaps for IMD Q1 vs IMD Q5 students.
- To consider recommendations to production and presentation module teams (including creation of alternative resources for home experiments with associated cost, module material modification and changes to assessment strategy and tuition) to support and improve student experience and success to lower the awarding gaps for IMD Q1 vs IMD Q5 students.

At this preliminary stage the project had three overarching research questions to address the research aims:

- What are the needs of students studying gateway stage 1 STEM modules, who reside in the most deprived four Nation UK postcodes?
- What are the possible barriers to their study? For example: Do IMD Q1 students have access to a suitable study space? How do students access study materials for modules with online only delivery?
- What overarching reasons could be influencing awarding gaps for students residing in IMD Q1 postcodes in comparison to students in IMD Q5 postcodes?

If successful it was hoped that a follow on/extension of this project could be applied to later stage one modules within STEM. Outputs of this proposed project could be used to inform interventions in other Stage 1 modules to

enhance student satisfaction and success for students with APS identified characteristics as well as social deprivation of residence.

Activities

Phase 1: Student Survey

A JISC electronic survey was sent in March 2025, via email, to a subset of students who had completed any presentation of SDK100, S111, U116, U101, T192 or T193 (see Table 1). An equal-sized sample of students was selected from each module to ensure that unintentional bias was not introduced into the data by having one module underepresented. Two separate survey groups were established, one for students who had resided in an IMD Q1 postcode area at the time of study, and the second group for students who had resided in an IMD Q5 postcode at the time of study.

Invitations were issued to 3000 students in each group. To increase survey response rate, the recommendations of Saleh and Bista (2017) were adopted in which responders were asked for their help personally, were told why they had been selected for for the survey, what the researchers hoped to achieve, and what the intented wider benefits and impact of this would be. Reminders were issued two weeks after initial invite. Students were informed of estimated time to complete the questionnaire (approx. 30 minutes).

The student survey asked a range of quantitative and free text questions relating to their student experience on the module. Key areas covered within the

questions included prior commitments surrounding study such as employment status and any caring responsibilities and available study time. Students were asked questions relating to the student assistance fund and whether they made use of this (including awareness of it), broadband access, how they accessed module materials (primary and supplementary methods) and where they studied (e.g. did they have a private study space free from noise and distractions). At the end of the survey students were invited to leave their contact details (name and e mail) if they were willing to participate in an online focus group or one-to-one interview (compensated with a £25 voucher of their choice).

Due to a low response rate (approx. 1%), the survey was repeated in September 2025 with new samples of IMD Q1 and IMD Q5 students drawn from SRPP. Due to a particularly low response rate from T192 and T193 students, a higher number of students from these modules was requested than for the other modules.

Table 2 summarises the survey response rates from both March 2025 and September 2025 combined.

	Students residing in IMD Q1 postcode at time of study	Students residing in IMD Q5 postcode at time of study
Number of students in total invited to participate in survey	4683	4927
Number of survery responses in total	114	139
Total response rate	2%	3%

Table 2 Summary of Survey Response Rates from March 2025 & September 2025

Phase 2: Student Focus Groups & Interviews

Answers to the first provision of the JISC survey in March 2025 were filtered according to students providing contact details. Of these, five students for each of IMD Q1 and IMD Q5 who had provided free text answers indicating relevant discussion were identified for further contact. These were invited to complete a doodle poll indicating availability to engage with a focus group to further discuss their views. A choice of daytime and evening was provided for each group and the email invitation offered one-to-one discussion as an alternative.

A further three (IMD Q1) and four (IMD Q5) students were subsequently contacted to expand the potential pool. Each doodle poll received three responses but in each case these were day, evening or neither (i.e. no consensus). Several students responded individually to indicate alternative availability. Due to the challenge in arranging a time for a focus group with multiple students attending, one-to-one meetings in Microsoft Teams took place with six students in total (three each for IMD Q1 and IMD Q5). The JISC survey was rerun in September 2025 and six students were invited to attend a one-to-one meeting. One student successfully attended a session within this second offering of interviews. Five students did not attend at the agreed time and did not respond to further communication. A total of 18 students were contacted to invite for focus group / interview.

Within each student one-to-one a series of nine specific questions were asked according to an agreed set of words, following an initial statement about recording and the module that the student had studied. The interviewer (IH) invited discussion around these and any other areas the participant wished to discuss within each interview. The interview questions are included in Appendix C and covered topics like study space, family support, extra equipment and resources, tutorials, and commitments alongside studying.

The transcript of each interview was anonymised to IMD 5/1 Q number and saved separately to the video recording (provided in case of requirement to check transcript accuracy). These transcripts were then analysed for themes based on the project purpose and aims.

This thematic analysis (e.g. Clarke and Braun, 2017) was undertaken by hand using first order coding to identify twelve common themes, grouping together these themes during second order coding to produce a list of five final themes.

Phase 3: Intersectionality Study

Open University-wide awarding gap data is available that indicates that students living in IMD Q1 postcodes are less likely to complete, pass and achieve a good pass on their modules (OU Access and Participation plan 20/21-24/25), but this study aimed to extend this by looking at other demographic factors in combination with student IMD status. An intersectional study to investigate whether STEM gateway module IMDQ1 students face a double disadvantage was undertaken. Intersectionality refers to the cumulative effects of multiple forms of discrimination affecting the daily lives of individuals (Crenshaw, 1989). The double disadvantage hypothesis states that individuals with more than one disadvantaged status experience poorer outcomes than their singly disadvantaged or privileged peers (e.g. De Jong and Madamba, 2001). This study uses pass rates from students' module assessment, and factors like whether they have a disability and whether they are the first in their family to go to university. Two years of data were analysed, many gateway STEM modules have two presentations per year. The main intersections investigated were:

- Index of Multiple Deprivation (IMD) and Ethnicity
- IMD and disability
- IMD and parents with/without Higher Education experience ('first in family')
- IMD and declaration of mental health challenges

- IMD and caring responsibilities

Where IMD Q1 is the most deprived 20% of UK postcodes and IMD Q5 is the least deprived 20% of UK postcodes.

Pass rates for students according to their IMD status were analysed against pass rates for the other factors (listed above) and if the rate for students at the intersection was below the rate for both the factors alone a 'double disadvantage' was identified. Two years' data was analysed for each intersection, with each IMD category plotted individually where data allowed and with IMD categories 1&2 combined to increase the number of students in each category. That is, over 80 sets of outputs/plots were generated (see Findings). The Office for National Statistics website was used to benchmark data and population distribution (Office for National Statistics, 2026).

Findings

Phase 1 – Student Survey

For the purposes of the quantitative data analysis, the findings from the two instances of the survey were combined for each group (IMD Q1 and IMD Q5).

Student Background

Figure 2 summarises the study background of the total number of students who responded to the survey.

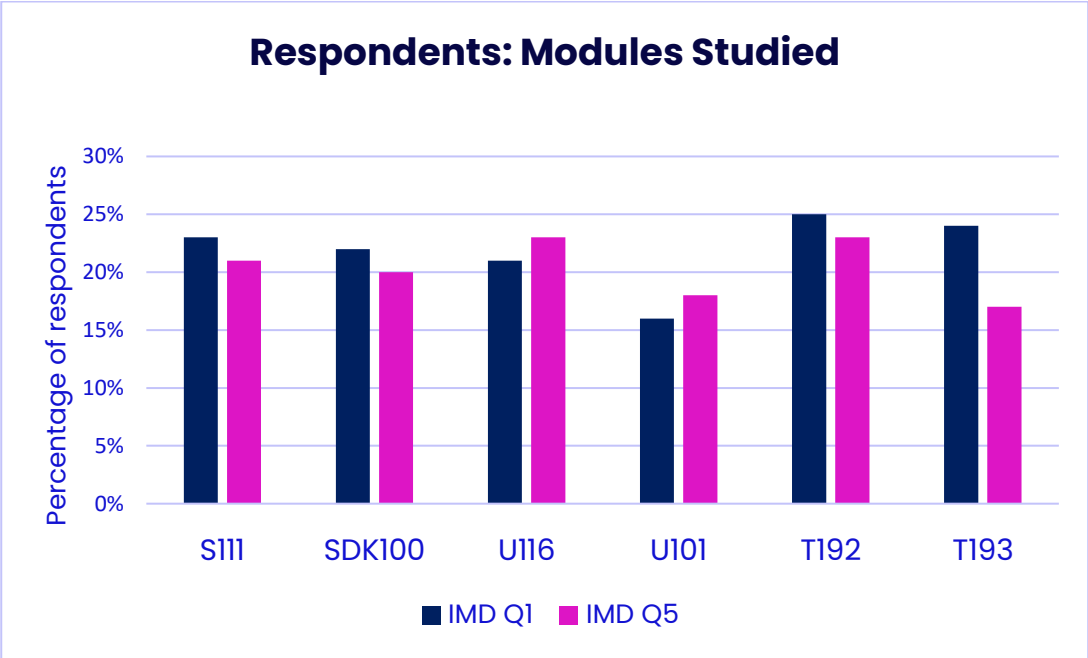

Figure 2 STEM Gateway modules studied by survey respondents (see Table 1 for module names)

No notable difference in response rate was evident between IMD Q1 and IMD Q5 (although the lowest response rate was noted from U101 in both survey groups).

Figure 3 summarises the survey respondents' study intensity together with the timeframe in which they studied their stage one module/s.

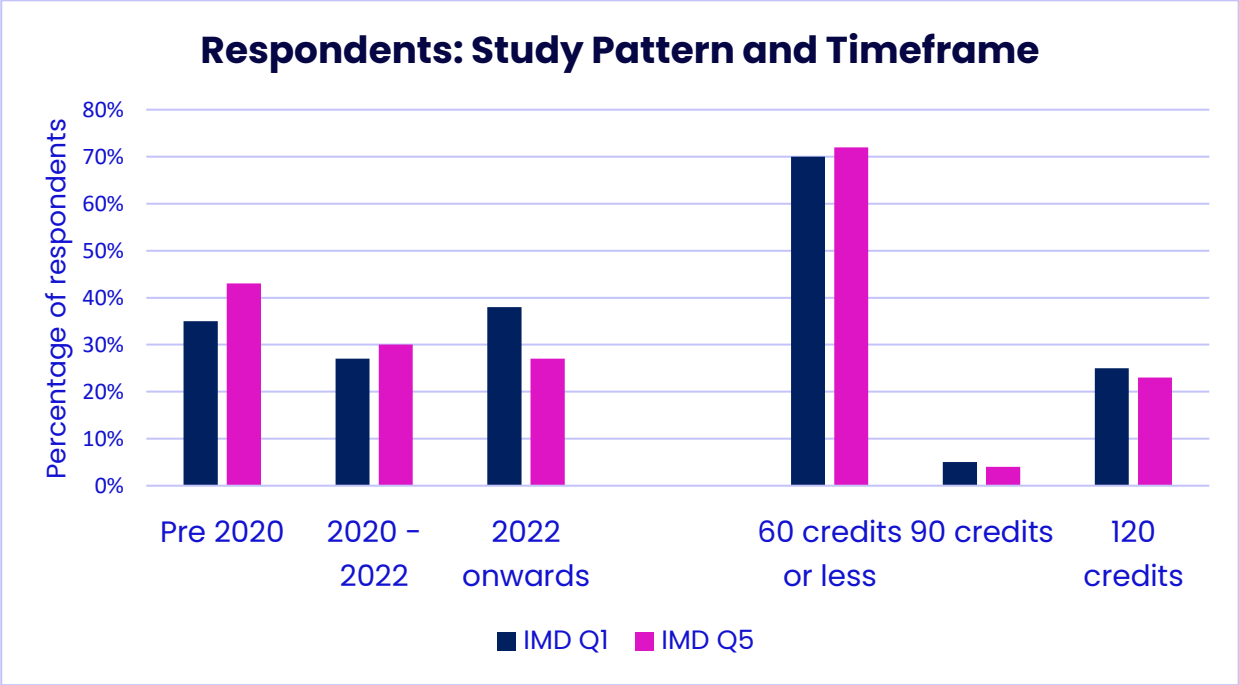

Figure 3 A comparison of study intensity and timeframe of study for each group

No notable differences were identified in either group, with the majority of students studying 60 credits or less in the one academic year.

Available Study Time

Initially the survey posed questions to explore the amount of time that students had available to study, beginning with the circumstances under which students

were studying their stage one module/s. Figure 4 illustrates a comparison of student commitments alongside their study during the module presentation.

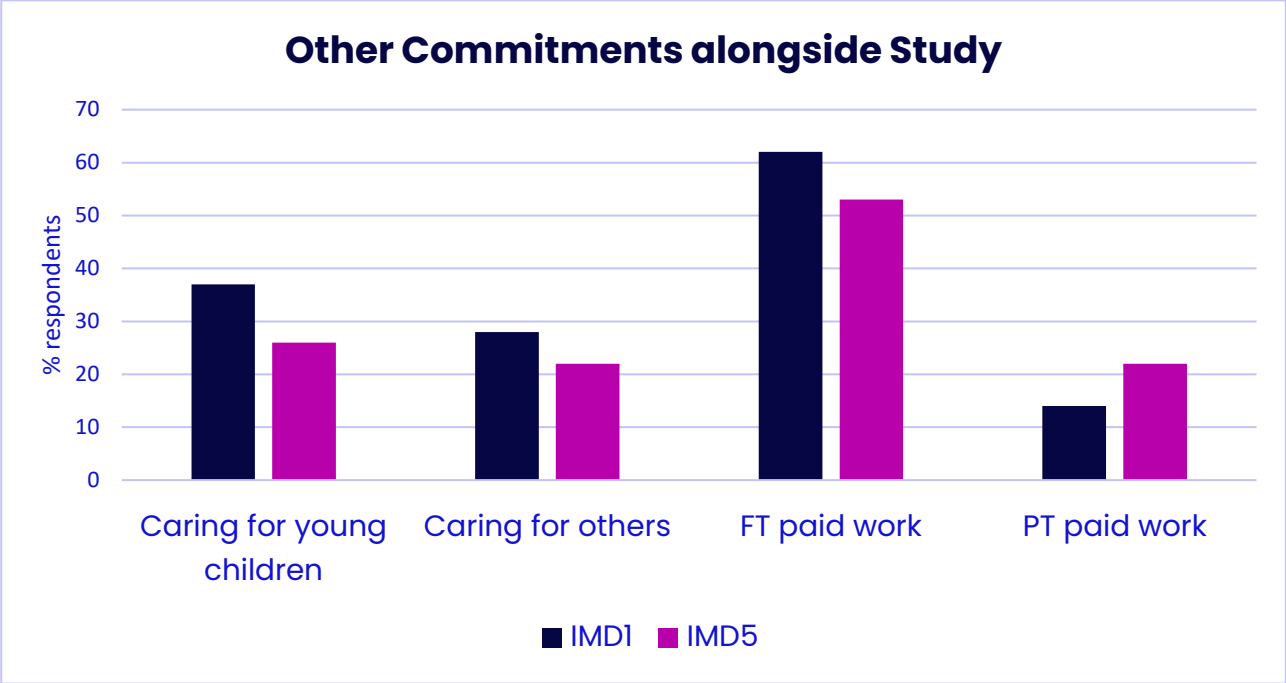

Figure 4 Other Commitments alongside Study

University wide, currently 69% of Open University students work whilst they are studying (The Open University, 2026a). Figure 4 sugests that our IMDQ1 students were more likely to be working full-time than those in IMDQ5. Furthermore, IMDQ1 students were more likely to have caring responsibilities than those in IMDQ5. This is consistent with the findings of a recent report (Lewis, 2023) which noted that Black students, disabled students, students aged over 25, students with caring responsiblities and students from lower socio-economic backgrounds are likely to be hardest hit by rising costs of food, transport, rent, and energy and

hence more likely than other demographics to be juggling employment with study.

Figure 5 illustrates the amount of time students stated that they had available to study and whether this was sufficient for both directed and self directed study of the module materials listed on the module study planner for a particular week.

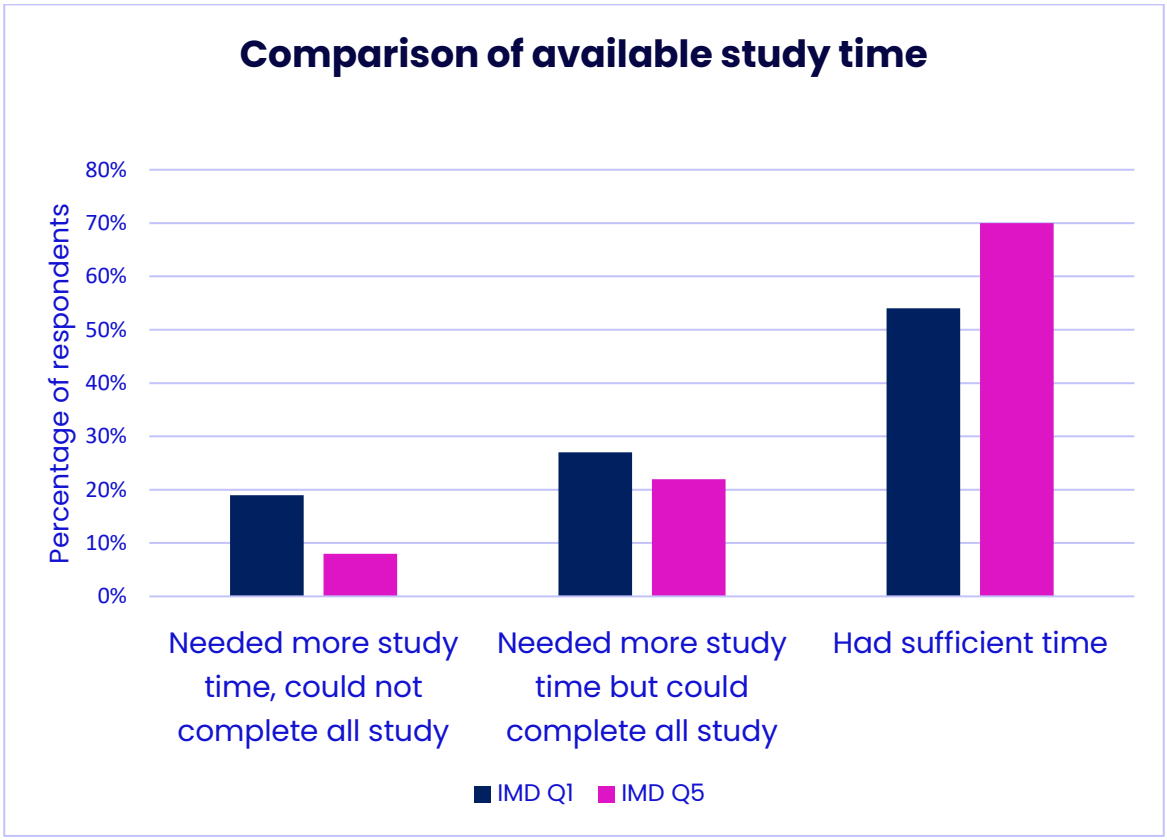

Figure 5 Comparison of time available to complete study each week

Figure 5 illustrates that in both groups, the majority of students stated that they had sufficient time available to study and were able to complete all directed

and self directed study within a particular week. However, more IMD Q1 students said that they needed more time to study than they had available, and hence could **not** complete all of their study on a weekly basis, than the IMD Q5 students (19% for IMD Q1 in comparison to 8% in IMD Q5), suggesting that students residing in IMD Q1 postcodes may be more likely to be pressurised for time. This is consistent with earlier findings suggesting that IMD Q1 students are more likely to be working full time and/or have caring responsibilities, one or both of which could be adversely impacting the amount of available study time, despite only studying at 60 credit intensity.

Free text comments received in relation to this question elaborated on this further:

> *Due to my financial situation I had to work full time whilst also studying full time. This made it very difficult for me to find time to study and often I would have to skip over parts of the module content and take a leap of faith when submitting my assignments.*

Anonymous IMD Q1 Student

> *I was having to find time here and there to study when I could around 2 jobs*

Anonymous IMD Q1 Student

> My study time was between 5am and 7am and then again after 10pm until around midnight on weekdays.
>
> **Anonymous IMD Q1 Student**

IMD Q5 student quotes also centered around having insufficient time to study, having to fit their study in around other commitments:

> *I worked part time whilst studying, it was hard to juggle both, especially when having to conduct experiments in other modules. I was often up until 3am working on assignments and essays.*
>
> **Anonymous IMD Q5 Student**

> *The recommended study hours are hard to meet when having a full-time job and a young family with children that have additional needs. It is hard to find the motivation and time when regularly doing 16-20 hour days.*
>
> **Anonymous IMD Q5 Student**

This reveals that students residing in both IMD Q1 and IMD Q5 very often experienced similar challenges regarding the amount of time they had available to study, perhaps due to a mis matched expectation of the time commitment involved in OU study, even at part time study intensity.

Study Space

The next section of the survey explored the space in which students studied regularly. Students were questioned about whether they had a dedicated study

space, and whether this study space was private or shared (e.g. with young children or other people), and free from surrounding noise, distractions and interruptions.

Figure 6 illustrates the different study spaces available to both student groups.

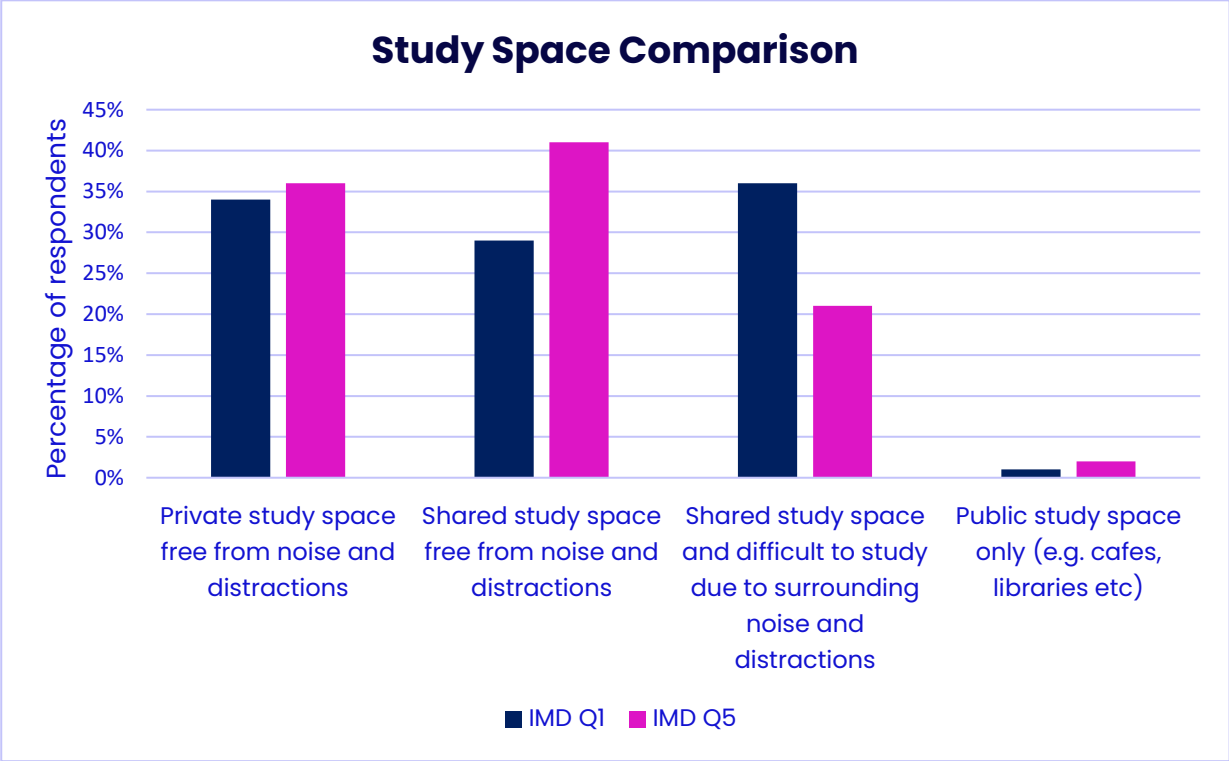

Figure 6 Available study space for students

A high proportion of students in both IMD Q1 and IMD Q5 groups (60% and 76% respectively) stated that they had a dedicated space (private or shared) in which to study. A similar proportion of students in each group stated that this space was private, and free from any surrounding background noise or distractions. However a greater proportion of IMD Q5 students than IMD Q1 students had to share their study space with others but are more likely to still be able to study without distraction. IMD Q1 students are more likely to experience noise and distractions within their shared space. IMD Q1 students are less likely

to have a dedicated study area, requiring study to be undertaken in communal space with other people, and are more likely to experience interruptions than IMD Q5. Both the university's Access and Participation Plan (2025-29) and its EDI Plan (2020-25) acknowledge that many students living in deprived postcodes live in overcrowded homes but neither plan explicitly mentions space for quiet study.

In their recent study, Barratt and Stanley (2023), have undertaken qualitative and quantitative analysis of student usage of the SCONUL scheme (which allows OU students to use the facilities of other member university libraries). A key finding from their survey reported that students appreciate a quiet, academically focussed environment. Studying in a library environment also helps OU students feel more like a member of an academic community as they are surrounded by other students, all studying in a similar way, thus helping to reduce the sense of isolation associated with online distance learning.

In our survey, several free text comments were noted by both student groups when asked to describe their own study space. Typically, IMD Q1 students stated that they did not have a dedicated room in which to study (such as an office) and were required to study in whatever spaces they could find available (although the survey responses suggest that sometimes these spaces were still private and free from distractions). Some students noted not having a desk and chair and were studying "in bed", or on the floor. In contrast, many IMD Q5 students described having their own home office or using a dedicated desk and chair.

Being the living room area, it was also the busiest area of the home so there was always someone watching tv or eating or other noise.

Anonymous IMD Q1 student

Other free text comments highlighted how IMD Q1 students were being forced to study within inappropriate study spaces which were not mirrored in the IMD Q5 student responses:

I live in a tower block that is constantly bombarded with noise from outside, above and below. There is also excessive drug use from other residents which seeps into the rooms and causes distress. I live next to a main 2 lane dual carriageway as well, which during the evening is noisy until around 9pm.

Anonymous IMD Q1 student

living in a HMO wasn't ideal for studying as I didn't have a lot of space or access to space and tools

Anonymous IMD Q1 student

N.B. HMO = House in multiple occupancy.

This contrasts with the experience of many IMD Q5 students who stated that they had their own private space at home, often in a dedicated office or room:

I had my own home office and an office in my workplace that I could use, more or less as I liked. It is very private and quiet at the top of the house

Anonymous IMD Q5 student

But, conversely different IMD Q5 students made the following statements:

At the time I did not have a desk or even dining table as my house was very small so if working at home I would do this on my sofa or in bed.

Anonymous IMD Q5 student

my home's street location was in some ways more distracting because it was in the middle of a popular student accommodation area for Bristol University [...] and was often loud with neighbouring parties etc for much of the year.

Anonymous IMD Q5 student

This is more in keeping with the free text responses made by IMD Q1 students, showing that some of our IMD Q5 students are studying in similar situations, without access to a dedicated study space with desk and chair for example.

Accessing Module Materials

The survey went on to consider how students accessed their study materials, and asked students to list primary (or their only) means of accessing the OU VLE, together with any secondary methods used. These survey questions were intended to look for any differences in how students accessed the VLE by group, however a possible confounding variable was inadvertently introduced here, as

one of the modules under investigation (U116) provided printed module materials to all students, making this question incomparable for these student groups. However, looking at the remaining modules with a requirement for regular online access, revealed that the majority of students in both IMD Q1 and IMD Q5 used a laptop as their primary means of accessing their online study materials (Figure 7).

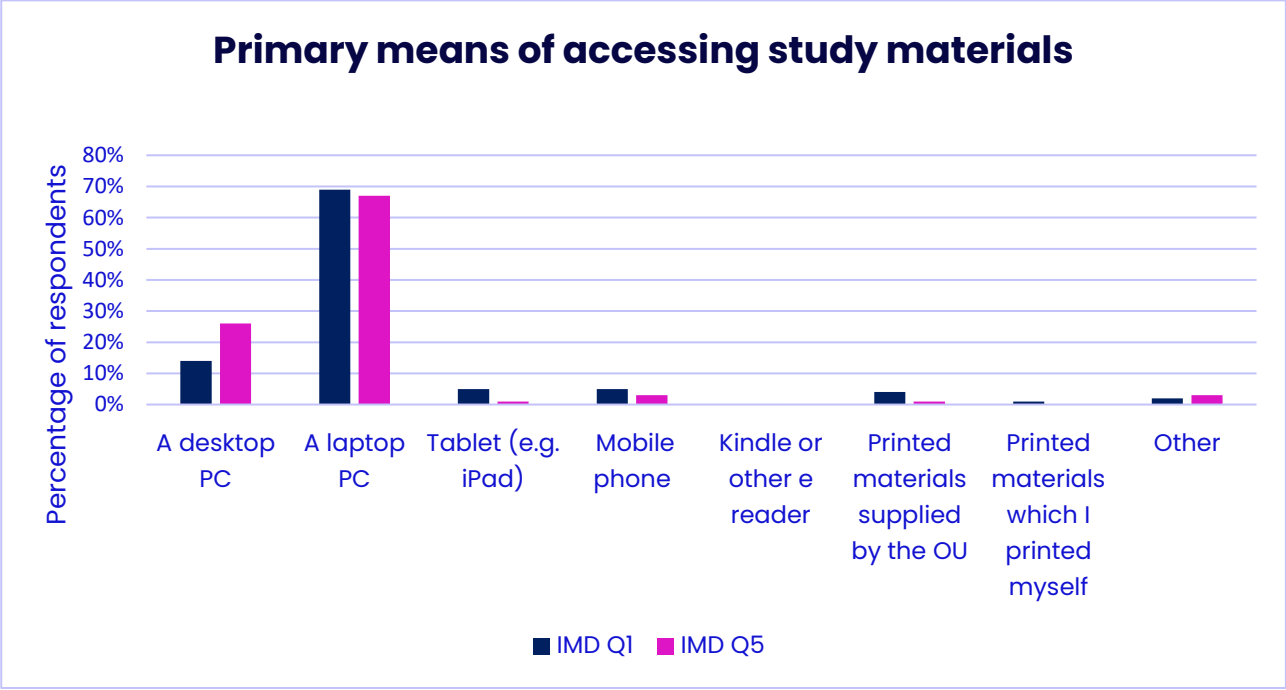

Figure 7 A comparison of the primary means used to access module materials (for modules hosted online only)

Figure 8 illustrates how students in each group accessed their online materials using a secondary, or supplementary method.

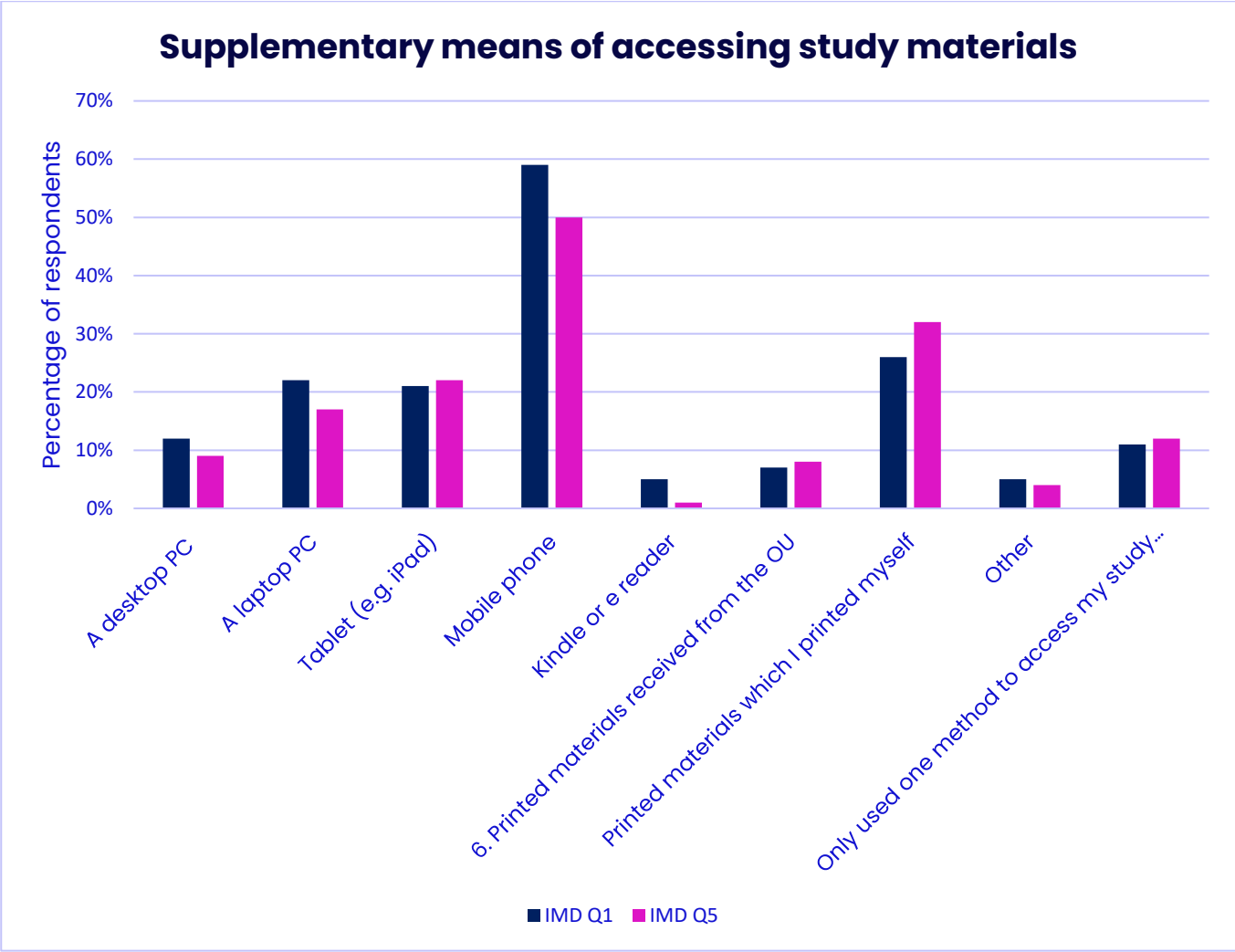

Figure 8 Supplementary/secondary methods of accessing online study materials

Figure 8 reveals a greater variability between IMD Q1 and IMD Q5 students, with IMD Q1 students being more likely to study from a mobile phone than IMD Q5 students, but for both groups, a mobile phone was only a secondary or supplementary means of access. For both IMD Q1 and IMD Q5 the primary means was a laptop PC and supplementary means a mobile phone. Figure 8 also indicates that the majority of students in both groups used more than one method to access their study materials. A relatively high percentage of students in each group (>25%) chose to print out their materials at their own cost.

Free text survey comments in relation to these questions provided some insight into why particular methods of access were used. Both groups mentioned the importance of device portability (e.g. preferring a laptop over a desktop as this could be moved between locations), however both IMD Q1 and IMD Q5 students noted restrictions in terms of devices used to access study materials, sometimes for reasons of cost.:

> *I didn't have a smart phone or tablet or anything like that. I only had a laptop so that is what I used. I couldn't afford anything else.*

Anonymous IMD Q1 student

> *Only had a phone but loaned a laptop for assessments*

Anonymous IMD Q1 student

IMD Q5 students also noted similar restrictions:

> *I only had one method of access, I did not own a smartphone at the time*

Anonymous IMD Q5 student

> *I also share the laptop with my husband who is also studying. When available I used the laptop.*

Anonymous IMD Q5 student

This indicates that assumptions should not be made about any student based on their postcode of residence and subsequent socio-economic status, in this case, having easy access to certain devices (such as smartphones) during their study.

Student Assistance Fund

The next phase of the survey considered whether students in each group made use of the Student Assistance Fund to support their studies. The Open University Student Assistance Fund has provided financial support to approximately 6000 students since 2020, provided certain eligibility criteria are met (The Open University, 2026b). Students can apply for funds of up to £500 to support their studies.

For both IMD Q1 and IMD Q5 groups, the majority of students in each group stated that they were not aware of the Student Assistance Fund (70% in IMD Q1 and 60% in IMD Q5) suggesting that greater visibility of this fund to all student groups would be beneficial. One IMD Q1 student noted in the free text comments that they were forced to give up study at one point due to financial difficulties, and had they known about the Student Assistance Fund, this may have changed things for them.

For students that were aware of the Student Assistance Fund, more students in IMD Q1 (29% of respondents) used the fund to support their studies than in IMD Q5 (where only 9% of respondents used the fund). In both IMD Q1 and IMD Q5 the main reason students did not apply to use the fund was because they thought that they did not meet the criteria to apply.

Figure 9 compares what the fund was used for by students in each group.

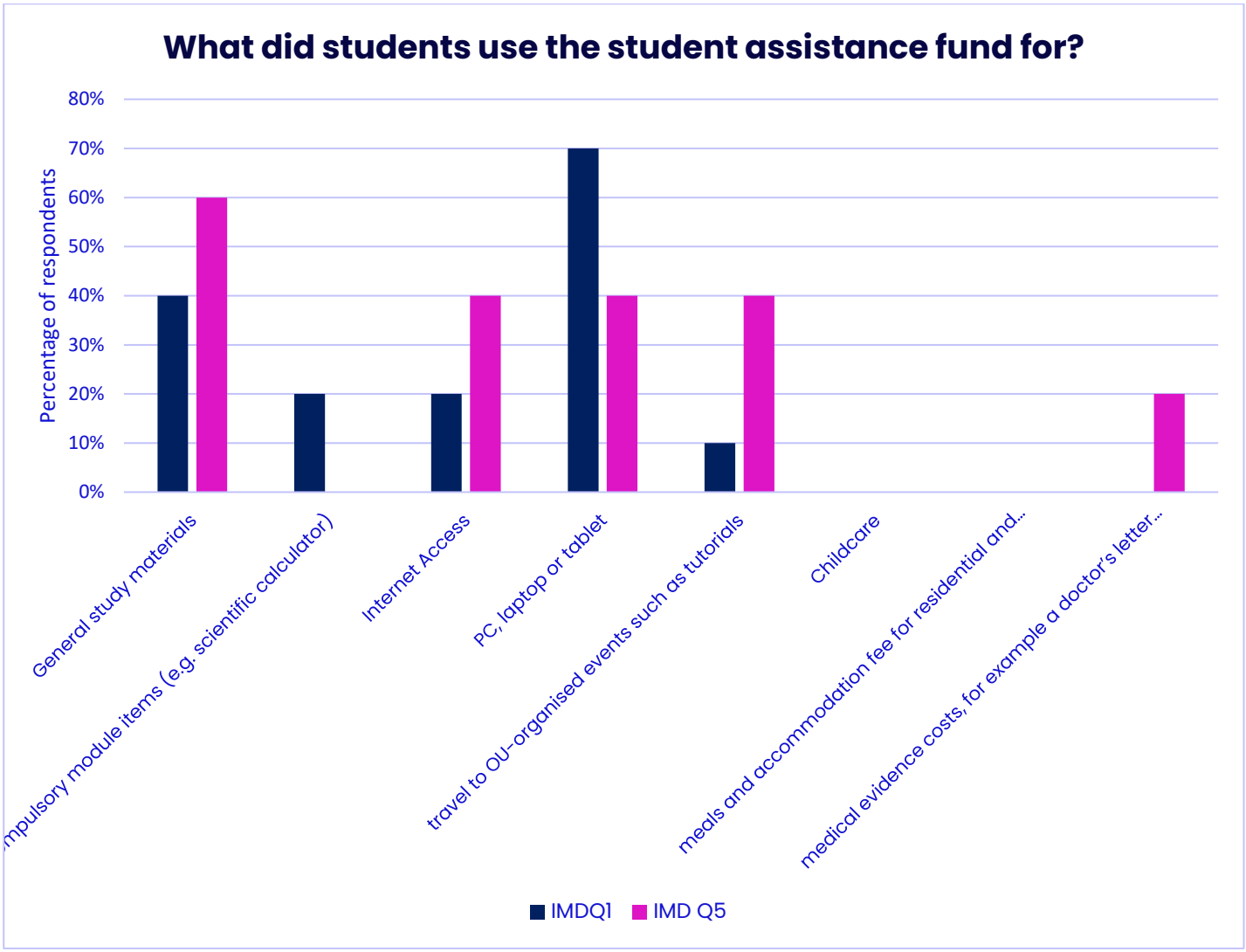

Figure 9 A comparison of use of the Student Assitance Fund in both groups

Figure 9 reveals that IMD Q1 students are more likely to use the Student Assistance Fund to purchase a PC/laptop/tablet in comparison to IMD Q5 students who used the fund more to purchase general study materials. Neither group made use of the fund for help with child care costs, although more IMD

Q5 students used the fund to help with broad band costs than IMD Q1 students. No students within the IMD Q5 group used the fund to purchase compulsory module items such as a scientific calculator, compared to 20% of respondents in the IMD Q1 group.

Free text comments relating to this question revealed additional insights into students' financial circumstances whilst studying. Of particular note is a comment from an IMD Q1 student who was studying U101 who gave insights into the additional costs and challenges associated with an assessed activity:

> *All of these were extra materials I required for various art projects. Another assignment required me to travel around my local area and place posters. Nobody in my immediate family drives so I had to use public transport which costs money. I also live in a highly deprived area and was worried that the posters I'd hang wouldn't last (we had to revisit them later as part of the project). The art posters that I placed publicly as part of my assignment were vandalised.*

Anonymous IMD Q1 student

Further issues about challenges experienced by students relating to their neighbourhood community were revealed in the student interviews (phase 2).

Another student commented that they were forced to skip activities which involved the purchasing of additional items:

I might have used it [the Student Assistance Fund] to buy equipment for laboratory assignments. I skipped any that weren't in the TMAs.

Anonymous IMD Q1 student

The student assistance fund came in really handy to upgrade my laptop, which would have otherwise not been compatible with the OU course.

Anonymous IMD Q1 student

However another IMD Q1 student noted a potential barrier for using the fund, relating to how the money could be claimed:

To claim the assistance you had to buy the items yourself then submit the receipts. I did not have the money to do that and the system is too much trouble

Anonymous IMD Q1 student

IMD Q5 students also made similar comments regarding financial circumstances and in particular one student noted that they were too embarrassed to apply to the fund.

I already receive benefits and help from government and I did not want to have more added to this as it's already embarrassing struggling while working full time

Anonymous IMD Q5 student

A second student also felt that they were not deserving enough to apply although the reasons for this (i.e. is this because of living in an affluent area) are not elucidated upon:

Although it would have been useful, I didn't feel deserving or that I had the right to the Student Assistance Fund, especially as I work full time.

Anonymous IMD Q5 student

An IMD Q5 student also made a similar comment to the IMD Q1 student who noted that the mechanism for obtaining financial support from the fund acted as a barrier to its use:

I needed a new laptop which I am aware you can get assistance with, but you have to purchase outright and then provide the receipt and I did not have the means to do this at the time.

Anonymous IMD Q5 student

Broadband Access

Finally, the survey compared student access to Broadband connections within the two groups. With regards to responses to the survey question asking if the student had reliable broadband connections, there was no notable difference between the two groups, with 82% of students from IMD Q1 and 85% of students from IMD Q5 stating that they had a reliable broadband connection.

However responses to the free text comment question were more insightful with regards to students in IMD Q5 in particular who cited difficulties with accessing broadband connections:

> *Internet connections and speeds are slower and some areas close to me do not have reliable internet connections. This could negatively impact learning.*

Anonymous IMD Q5 student

> *I live in an extremely rural area where the internet signal was terrible and there is also no mobile signal, although difficult at times I was able to carry out my studies mainly using pen and paper but this was explained to my tutor and they were understanding when I would potentially have wifi / electric black outs due to lack of WiFi speed or lack of funds to top the electric up*

Anonymous IMD Q5 student

At the time my broadband connection was a bit temperamental as I lived in a semi-rural area and my phone signal was also not the best. I relied on the module textbooks a lot and when I got to the public library

Anonymous IMD Q5 student

In terms of what the OU could have done then perhaps make allowances for those with slower internet connections and also those who live in noisy households like mine.

Anonymous IMD Q5 student

I didn't have broadband but was able to use my phone's data allowance and connected it to a laptop to act as the broadband link. When the data bundle ran out, I would go to the library

Anonymous IMD Q5 student

A recent article Ferguson, (2025) considers the so called “rural digital divide” in which only 63% of rural areas are said to have reliable access to superfast broadband, compared to 94% of urban areas. In particular the detrimental impact this has on online activities in rural areas such as online education was considered a priority. This contrasts quite considerably with a recent Ofcom

report which claims that 91% of the UK rural areas are now said to have access to superfast broadband (Ofcom, 2025).

Furthermore, recent statistics show that population in rural IMD Q5 areas (Department for Environment, 2026) is decreasing, stating specifically that rural neighbourhoods tend to be relatively less deprived than urban neighbourhoods.

Nevertheless, all of our survey free text comments regarding difficulties with broadband access are from students who were residing in an IMD Q5 postcode area at the time of study. No such comments were noted from IMD Q1 students, suggesting that broadband accessibility may be more of an issue for IMD Q5 students, especially those within rural areas (see project limitations below). These free text comments also allude to financial pressures for these IMD Q5 students (for example the comment relating to needing to top up electric meters).

Phase 2: Student Interviews

Four students were interviewed from the IMD Q1 group and three from the IMD Q5 students.

Themes identified from thematic analysis of each interview transcript mirrored those of the survey free text comments.

A combined thematic analysis of the survey responses and one-to-one interview transcript revealed five main themes:

- Self-confidence linked to belonging/alienation
- Finance, resources and space
- Motivations for study and inspirations
- Neighbourhood and community
- Family support and ethos

Theme 1 – Self-confidence linked to belonging/alienation

A clear theme evident from the interview transcripts was the role of self-confidence in student experiences. IMD Q1 students reported feeling 'old' or 'stupid' compared to other students whereas one particular IMD Q5 student reported preparing themselves a cocktail before each tutorial and explained they would often ask the tutor if they could have a chat after the session, felt they didn't lose credibility admitting they 'didn't have clue' and described the enjoyment of delivering an unexpected comment or question:

> *It was great fun being able to throw curve balls in the tutorials*
>
> **Anonymous IMD Q5 student**

However attendance at tutorials also helped one IMD Q1 student grow in confidence:

> *[Attendance at tutorials] gave me a little bit more confidence. I also realised I was not the only one struggling*
>
> **Anonymous IMD Q1 student**

However, a comment from an IMDQ1 student made in the survey hints at feelings of imposter syndrome:

> *Most other students seemed to be from much nicer areas than mine, which made it hard to relate to others*
>
> **Anonymous IMD Q1 student**

Yorke, (2016) also links 'belongingness' to self confidence stating that some groups of students are less confident about studying at university level and worry about the difficulty of the work. He identifes lack of self-confidence in those who are 'first in family' and that the least disadvantaged students had the most self-confidence and sense of belonging, mirroring our findings.

Theme 2 - Finance, resources and space

The second theme focuses on considerations all, ultimately, linked to money. Several IMDQ1 students told us they were limited in some way by budgetary constraints.

> *I couldn't afford to go to uni after I left school*
>
> **Anonymous IMD Q1 student**

> *I just watched the online video. I couldn't afford the stuff to do [the experiment]*
>
> **Anonymous IMD Q1 student**

> *I thought 'how am I going to get the fuel to attend [a tutorial]?*

Anonymous IMD Q1 student

Conversely for IMDQ5 students:

> *I managed to sort of source all the little gizmos we needed for the experiments, had great fun with that, kept Amazon busy*

Anonymous IMD Q5 student

> *I feel slightly embarrassed that I can afford it easily when I know a lot of people sacrifice a lot, both money, time, energy, family life to get their studies done*

Anonymous IMD Q5 student

Space conducive to study (or lack of) was the other facet of this theme linking closely to many comments from the survey:

> *I had kids running about in the house and stuff like that [while trying to complete a TMA]*

Anonymous IMD Q1 student

> *I often sat on my bed to study*

Anonymous IMD Q1 student

However, one students in a IMDQ5 area reported space difficulties:

> *My [rented] room was like a shoe box*

Anonymous IMD Q5 student

Writing for the OECD in 2006, Machin reported that 'social disadvantage affects the learning experiences of households with fewer economic resources, at each stage of the individuals' life-course'. It seems, for the IMDQ1 students quoted, little has changed in the 20 years since that was written.

Theme 3 - Motivations for study and inspirations

The students from IMDQ1 backgrounds often had clear motivations for study:

> *I wanted something better' [than neighbours in low paid work]. It challenges the way that you think you can do a course. In some ways it pushes you forward*

Anonymous IMD Q1 student

> *I made a connection with getting a better job through further education, […] a bit better money which will impact my lifestyle*

Anonymous IMD Q1 student

> *I just thought, well, [living in a deprived area] is temporary. I need to get on with it. I need to get this degree*

Anonymous IMD Q1 student

And one in particular had a very clear goal:

> *[about others in locality] they come straight out of school and just go on benefits, no jobs and things like that. I don't want to be like that I just needed a change in life, and I thought what I really wanted to do, that I wanted to be an engineer.*

Anonymous IMD Q1 student

Bredenkamp, Botma and Nyoni, (2023) identify HE students motivated to learn specifically to be ready to better themselves in the workplace. They discuss how this could be related to developing countries (the Global South) but there are also parallels with deprived areas in the Global North.

Theme 4 - Neighbourhood and community

Perhaps the most shocking quotes come under the theme of neighbourhood and community. Several IMDQ1 students described challenges relating to their local area:

> *Some nights you hadn't slept at all because they were fighting and shouting and breaking glasses and bottles.*

Anonymous IMD Q1 student

> *There's a lot of crime and a lot of, I guess what you could say, poverty.*

Anonymous IMD Q1 student

I don't tell many people, my neighbours don't know I'm at uni', they'd rip into me.

Anonymous IMD Q1 student

I know the guys across the road were drug addicts. They used to grow weed in their house.

Anonymous IMD Q1 student

Another IMDQ1 student also mentioned within the survey free-text comments that there was drug use in their neighbourhood:

there was a continuous smell of cannabis

Anonymous IMD Q1 student

As with the survey, several students mentioned drugs, crime and poverty. Varlık et al., (2025) write about the impacts of violence and poverty on education but also argue that education is part of the solution reducing poverty, violence and inequalities, something our self-motivated IMDQ1 students would agree with. Varlık et al advocate for psychological and social support systems to enable students to overcome barriers.

Worryingly, an IMDQ1 student reported having been turned away from the library of another university after explaining that they were studying with the OU quoting the library staff member as saying 'save it for the real students'. The OU library have reached out to this university and the student concerned.

The IMDQ5 students said less about their local communities; perhaps there was nothing remarkable to them, not noticing their privilege. In common with some survey comments, one IMDQ5 student in a rural location mentioned poor, intermittent broadband making studying online challenging and also thought they were probably the only person locally studying remotely for a degree.

Theme 5 - Family support and ethos

Our last theme is family support and ethos or attitude. Although the IMDQ1 students reported not always feeling they have the support of others in their community (above under Theme 4) they mostly reported the support of family.

> *I have a supportive family and friends, […] they heavily supported me during the course, [they] haven't really accessed higher education.*
>
> **Anonymous IMD Q1 student**

> *We'd badger each other 'have you done your TMA?'*
>
> **Anonymous IMD Q1 student**

Although one IMDQ1 student reported their ex-spouse was less than supportive:

> *[X] will not help me out with the kids when I'm busy with my uni work, it's deliberate.*
>
> **Anonymous IMD Q1 student**

IMDQ5 students generally reported suppotive families although one stated that their family was overseas so they sometimes had to arrange to travel at short notice impacting study time.

Phase 3: Intersectionality Study

Unlike our previous work (MacBrayne *et al.*, 2024, 2025) which identified a clear double disadvantage for Black students living in deprived areas, this study has not found any consistent double disadvantages for students at the intersection of two under-represented or marginalised groups across STEM gateway modules.

The intersectional charts in this section all plot:

- average pass rates for IMD quintiles as red circles
- average pass rates for other under-represented or marginalised groups as green triangles
- pass rate for the students at the intersection of those groups as a yellow cross.

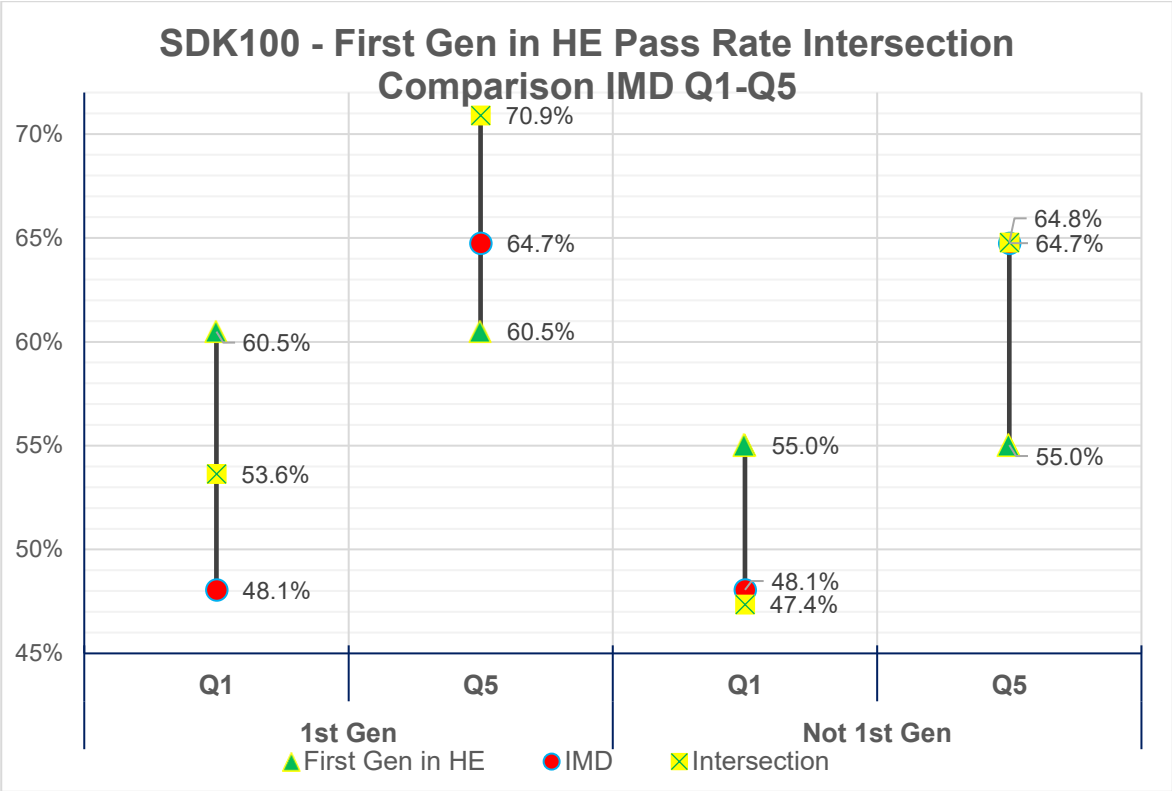

Figure 10 Pass rate comparison on the gateway Health Science module (SDK100) for students at the intersection of IMDQ1 and Q5 with 'First in family' in higher education.

For example, Figure 10 shows the pass rate for IMDQ1 students on the Health science module SDK100 at 48.1% and 64.7% for IMDQ5, along with 60.5% pass rate for those who were the first in their family to go to university versus 55.0% for those who were not the first. The students at the intersection for IMDQ1 and first in family is 53.6%, i.e. not lower than both the two factors alone, that is, the yellow cross is not below both the other two points. Interestingly the students at the intersection of IMDQ1 who were not the first in their family to go to university had a similar pass rate to those in IMDQ1 overall.

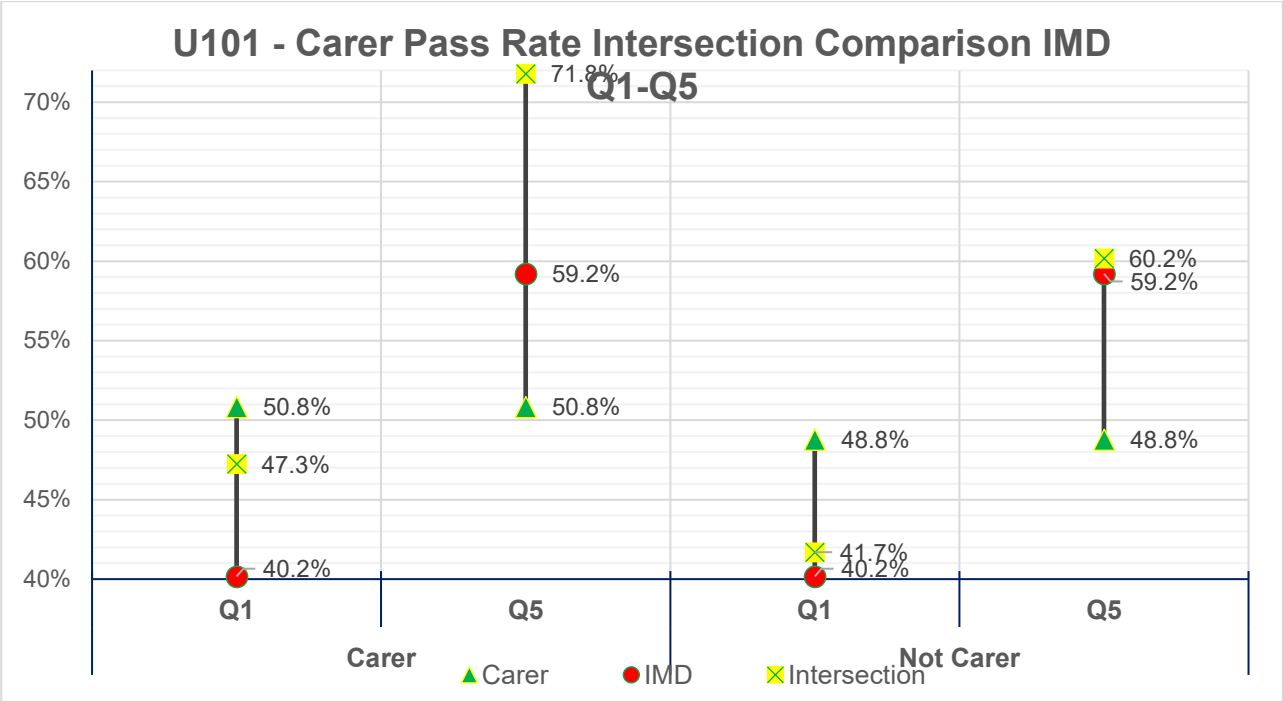

Figure 11 Pass rate comparison on the gateway Design module (U101) for students at the intersection of IMDQ1 and Q5 with carer status.

Similarly Figure 11 illustrates that the pass rate for IMDQ1 students on the Design module U101 was 40.2% and 59.2% for IMDQ5, along with 50.8% pass rate for those who had caring responsibilties versus 48.8% for those who didn't. The students at the intersection for IMDQ1 and carer is 47.3%, i.e. not lower than both the two factors alone, that is, the yellow cross is not below both the other two points.

However, although there were no consistent double disadvantages across STEM gateway modules by protected characteristic, a summary of all 80+ graphs revealed a set of double disadvantages for the Engineering module T193, see Figure 12.

No double disadvantage													
Double disadvantage		3% minimum for highlight, rounded to nearest whole %											
		ETHNICITY				DISABILITY			FAMILY IN HE		CARER		
		Black	Asian	Mixed	White	Mental Health	Disability Any	None declared	1st Gen'ation	Not 1st Gen'ation	Carer	Not Carer	
	T192 Q1						6%						
	T192 Q5												
	T193 Q1	16%		17%		16%	15%					4%	
	T193 Q5					11%	4%		5%			5%	
	S111 Q1	4%				11%	7%						
	S111 Q5												
	SDK100 Q1					6%	5%						
	SDK100 Q5												
	U116 Q1	13%	9%										
	U116 Q5												
	U101 Q1												
	U101 Q5												

Figure 12 Summary of all double disadvantages across STEM gateway modules included in the study. Only those over 3% are included, all are rounded to the nearest whole %. Values are the negative difference in pass rate between the students at the intersection and both groups of students with one but not both characteristics.

Some of the values for double disadvantages on T193 are well over 10%, notably students in IMDQ1 areas who describe their ethnicity as 'mixed' (17%) or Black (16%) and those declaring a mental health issue (MHI) (also 16%) with those declaring any disability (including MHI) also high at 15%, see Figure 13.

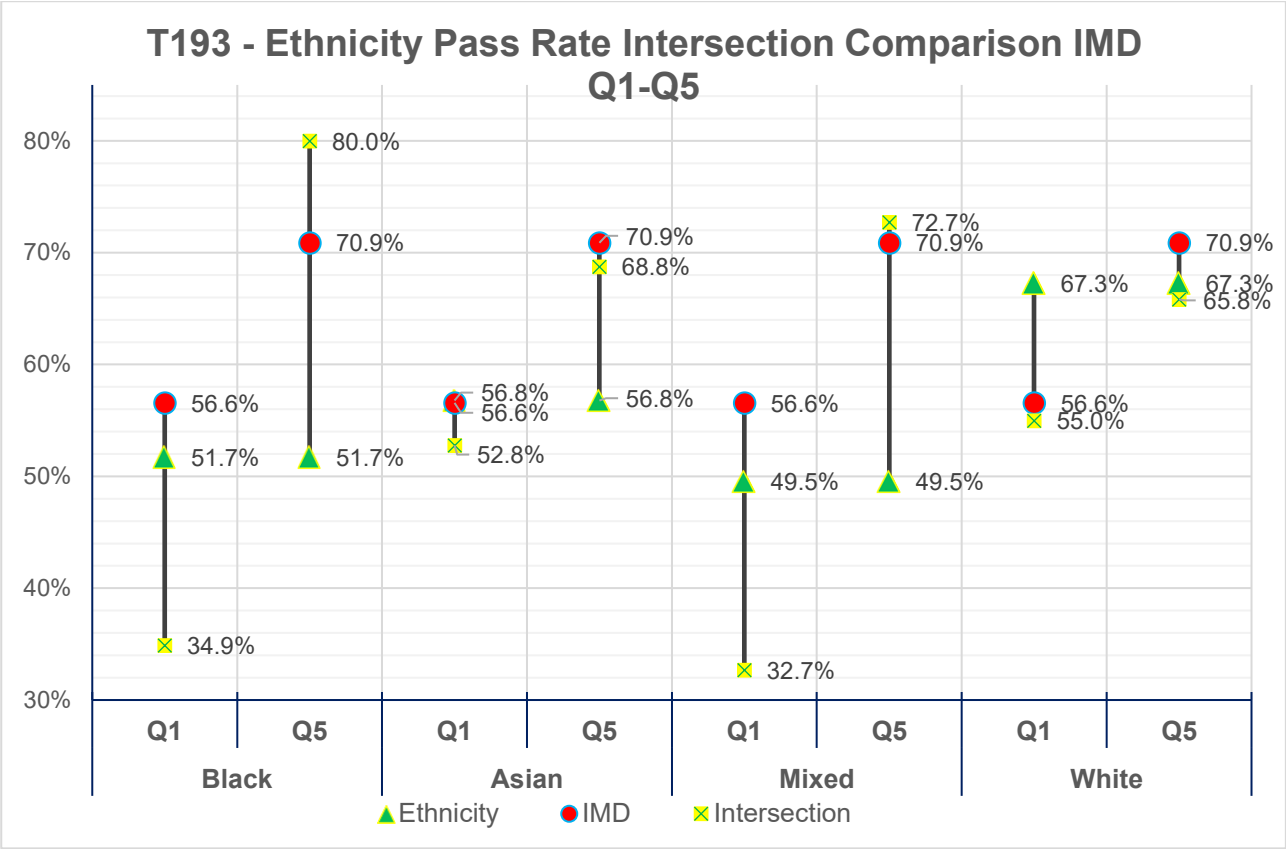

Figure 13 Pass rate comparison on the gateway Engineering module (T193) for students at the intersection of IMDQ1 and Q5 with ethnicity showing double disadvantages for Black IMD Q1 students (16%) and those IMD Q1 students who identify as mixed ethnicity (17%), i.e. the yellow crosses representing the students at the intersections are well below the points for the two charactersitics alone.

T193 is also unusual among these modules in having double disadvantages for students in IMDQ5 if they have MHI (11%) and other smaller values for other characteristics although we believe these findings need further investigation.

Interestingly Black students in IMDQ5 locations had much higher pass rates on engineering modules, although this 'advantage' disappeared when IMDQ3 and Q4 were combined with IMDQ5 against IMDQ1 and IMDQ2 suggesting only those in the most privileged locations were seeing this benefit.

Figure 12 also shows that some but not all modules have a double disadvantage for students with disabilities and MHI, but this is not consistent across all STEM gateway modules. There is extensive scholarship and published research recognising the awarding gaps for students with disabilities and those with MHI and making recommendations for improvement (e.g. Lotz and Sippel, 2024).

Notably the Design module U101 has no double disadvantages over 3% at all for IMDQ1 students. The Environment module U116 has none for disabled IMDQ1 students whereas the Health science module SDK100 has none for IMDQ1 students from minority ethnic backgrounds. It would be useful to find out from staff on those three modules whether they have any idea why this is or whether they have taken steps to include or support these students groups.

Recommendations, implications and limitations

Recommendations

The project team makes several recommendations based on the findings from this study:

SCONUL Access

Promote SCONUL access (use of other university libraries by OU students as quiet place to study) for those without desk/space/quiet at home. Our findings indicate that students in both IMD Q1 and IMD Q5 areas can struggle to find a study space free from noise and distraction, although this is more likely to be an issue for IMD Q1 students. The OU is the largest user of the SCONUL access scheme (Barratt and Stanley, 2023), yet student awareness within STEM seems low. In their study of student usage of the SCONUL access scheme, Barratt and Stanley note that students who were members of the SCONUL access scheme were more likely to gain a distinction/first class honours classification (a 'good' degree) than students who were not a member.

Student visibility of the SCONUL access scheme could be increased by greater promotion on module websites, for example, including information on the scheme in module guides and including SCONUL in module team and AL led

briefings (a slide was prepared by the project team and distributed to 25J and 26B module teams for this purpose). This is of particular importance for students at the start of their qualification, who could go on to use the scheme throughout the rest of their qualification. Our project revealed one student who was refused entry to a partner institution library, hence the information provided for this scheme should encourage students to report any access issues they may encounter.

Currently the main place that the SCONUL scheme is advertised is via the OU Library website. The project team makes a strong recommendation that greater visibility is attached to this. Barratt and Stanley, (2023) made a similar recommendation within their report about more promotion of the scheme, and as a result have been able to send promotional e mail campaigning to students and to ALs, together with some social media promotions, but usage of the scheme has not increased significantly as a direct result. We believe that far greater visibility of this scheme will be achieved by inclusion on module VLEs/module guides as this will be one of the first parts of the OU VLE that a new student should visit. The project team will work directly with the SCONUL library coordinators to facilitate this.

IMD Q1 Flag on Student records

This project has illustrated that IMDQ1 students are more likely to be working full time and more likely to have caring responsibilities. The project team recommends that the wider University considers use of a flag (similar to the "carer" flag) whereby students residing in an IMD Q1 postcode area are

highlighted to both Student Support and AL staff (among others). This could increase awareness of the issues that could be faced by students residing in an IMD1 postcode (e.g. additional proactive support or flexibility with TMA extensions) and could be taken into consideration if discretionary postponement is requested. The findings from this project have reinforced findings in a previous project (MacBrayne *et al.*, 2024) in which the same recommendation was made, based on the Black student experience on S112 (another stage one module in Science, although not a gateway module) where a significant double disadvantage was identified for Black students living in IMDQ1 postcodes.

Be mindful of additional costs associated with study

This project has reinforced the findings of a previous eSTEeM project (MacBrayne and Chapman, 2025) in which strong recommendations were made around additional costs associated with study. Module teams should consider cost and availability of items and equipment which may need to be purchased (especially for assessed activities), avoiding the assumption that students will have certain items readily available (e.g., access to a smartphone or household facilities such as a fridge) and that students have the disposable income to purchase specific items.

MacBrayne and Chapman, (2025) previously recommended that module teams make use of fully accessible alternative resources for home experiments or activities that may require the purchasing of essential items. Every home experiment should have alternative resources readily available (avoiding the need for students to ask for access to them) and the resource should be able to

offer a reasonable parity of experience. MacBrayne and Chapman (2025) have illustrated how videos could be used to allow students to take their own observations from practical work without having to set up the experiments themselves. This project strongly reinforces this previous recommendation.

Furthermore, students should be supported to understand use of alternative resources is not a negative thing – especially if managing mitigating circumstances.

Student Assistance Fund

Increase visibility of student assistance fund. Similarly to the SCONUL access, this project recommends that the Student Assistance Fund is highlighted to students at module start and in early module tutorials/module guides. Such information could also be included within student induction information sent to new OU students prior to the start of their first module. The project team also recommends a wider institutional level change to how students can assess the fund by removing the need for students to buy costly items such as laptops up front and then claim back. Our findings indicate that this was a barrier for some students who were unable to access the fund as they did not have sufficient funds available to make an initial purchase. Is there scope for a partnership between the OU and a supplier of IT equipment to be established, enabling the student to purchase a laptop directly from the supplier, with the invoice being issued to the OU via the Student Assistance Fund?

Whilst such a partnership for costly items may be feasible, accessing funds in advance to purchase smaller, less costly items (for example, those that might be needed for home experiments) may be harder, although not impossible.

The previous eSTEeM project by MacBrayne and Chapman (2025) showed that students displayed willingness to purchase (up to £50) a home experiment kit that would contain all of the items needed for home experiments in one module (similar to the OUSA S111 kit) so consideration should be given to the production of these kits with a recommendation to explore costs and logistics associated with making these available.

Home experiment kits could be means tested for students on low incomes and made available where students met eligibility criteria (similar to how applications for the Student Assistance Fund are assessed).

Lack of Self Confidence and Sense of Belonging

A strong theme from the student interviews related to lack of self-confidence and self-belief from IMD Q1 students, with students describing what could be envisaged as imposter syndrome. The project team recommends increasing the visibility of university staff, especially academic staff, from non-traditional and working-class backgrounds and encourage those staff to be open about their lived experiences. A related theme illustrates that students in both IMD Q1 and in particular those students living in rural IMD Q5 areas, can feel a sense of loneliness and isolation during their study. We would recommend that at module, qualification and school level, consideration is given to running events

outside of formal module tuition strategies to facilitate and encourage a sense of student community. For example, Science modules and qualifications are continuing to use the Science Study Site for online enrichment events. Where possible, face to face day schools (currently possible at qualification level) could focus on community building and peer support, in addition to academic skills. Bellamy and Araya (2025) advocate for city park-based events as a way of fostering a sense of belonging among environment students, potentially those in IMDQ1 postcodes.

Challenge Assumptions

The project team encourages module teams to challenge any assumptions made about students – one example being that all students have reliable internet connections. A perhaps unexpected finding from our research has revealed that students in rural IMD Q5 postcodes in particular can experience challenges with poor or unreliable internet connections. Module teams and ALs could place increased emphasis on the downloading of offline module materials (e.g. in the format of PDFs) to ensure that students are aware that they could have a back-up available if their broadband connection were to drop out at a particular point.

Limitations

Limitations of this research have largely focused around engaging students actively in the research. Despite the survey being sent to a high number of

students, response rates remained low at 2 – 3%, meaning that it could be argued that a relatively small proportion of the student cohorts on each module contributed. Contributions from U101 students were particularly low. It is unclear why students were so reluctant to participate in our research, in both instances of the surveys, suggesting that time of year was not a major contributing factor. Perhaps this relates to the wider trust issues cited in our previous research (MacBrayne *et al.*, 2024, 2025) about student reluctance to engage in scholarship.

Despite a relatively high proportion of survey respondents stating that they were happy to be interviewed, relatively few responded to attempts to contact to arrange this, despite the incentive of a £25 voucher of their choice in exchange for a one-hour discussion. The project team recommends that future online surveys that mention follow up initiatives, should elaborate more on the nature of these including any selection processes used to select students to set realistic student expectations.

Fast broadband access issues were raised in the survey by several IMDQ5 students based in rural areas. It is possible that these students are unrepresentative of IMDQ5 students and that they were attracted to participate in the project, given its mention of geographical location, so that they could contribute these specific experiences. It is likely that this finding identifies a rural vs urban difference rather than one between IMDQ1 and IMDQ5.

Impact

a) Student Experience

This project is anticipated to contribute to increasing student success across different curriculum. Whilst key recommendations are positioned for gateway stage one STEM modules, there is significant potential for other modules at later stages within qualifications to benefit. For example, any other modules could also be encouraged to signpost more widely sources of help such as the Student Assistance Fund and the SCONUL access scheme. Also, there is the potential for other modules requiring student funded activities to consider kit boxes/funding/reducing requirement for assessment of activities at students' own expense. There is also the potential to highlight inequity in accessing a suitable study space to other module teams, and have others consider any assumptions made about their students during delivery of teaching materials and design of activities, for example, assuming that all students will have access to a smart phone.

b) Teaching

The outcomes of this project have made the project team more aware of the issues that students might be facing, particularly in the role of being an Associate Lecturer, and the importance of a suitable support mechanism for students at the start of their qualification and beyond. The project team are encouraging others directly involved in the writing and delivery of teaching

materials to challenge their assumptions that students will be able to begin their OU study in easy circumstances, and be more mindful of how facilities are not always accessible to some students. This is particularly relevant to a new stage one science curriculum about to enter full production for 28J.

Outputs from this research are contributing to increasing awareness of students' study circumstances outside of the Open University across the wider HE sector, via the Society for Natural Sciences Heads of Natural Sciences group. One of the project leaders is the chair of this group and has disseminated the early findings and recommendations arising from this research to other Heads of Natural Sciences across the UK and how changes can be made to teaching practice and supporting students. One example of this could relate to encouraging students at these other institutions to make use of their University library spaces for study as an alternative to trying to study at home. This is of particular relevance to other institutions who are still adopting a blending method of delivery with students being given 1–2 days each week for self directed study at home. The UCAS end of cycle data for 2025 (UCAS, 2025) reports a 7% increase in the number of students deciding to live at home and commute to University for their directed study time, a proportion that has increased steadily since 2016. This now means that 31% of UK 18-year-old accepted applicants indicated in their UCAS application that they intended to live at home in the 26/27 academic year – a record high. This highlights how the findings and recommendations of this report extend beyond the immediate reach of the OU and why wider dissemination is important. In addition to the dissemintation already happening via the Society for Natural Sciences, the project team are also planning to present this project work at the Advance HE

EDI conference in March 2026, and have been invited to give talks for other OU faculties through spring 2026, and will actively look for other opportunities to increase awareness of this research.

c) Strategic Change and Learning Design

This project is yet to influence any strategic change or learning design, however, the authors are hoping to use findings to lobby for strategic change around the support of students from IMD Q1 postcodes more broadly across the faculty and wider university. It is hoped that The Open University will explore solutions for students who may be studying under challenging circumstances and raise more awareness at an institutional level of the challenges faced by our students (not necessarily those who reside in an IMD Q1 postcode) and the support mechanisms already in place.

Dissemination

Dissemination

Project outputs have been disseminated as follows:

- **eSTEeM conference** April 2026 (planned oral presentation)
- **FASS Student outcomes day** April 2026 (planned oral presentation)
- **FBL Let's talk retention event** April 2026 (planned oral presentation)
- **AHE EDI Conference** March 2026 (planned poster presentation)
- **STEM APS Team** March 2026 (planned oral presentation)
- **FASS SSGS BoS active presentation meeting** February 2026 (oral presentation)
- **eSTEeM conference** 2025 (poster presentation) ***Winner - Best Poster Competition, 14th eSTEeM Annual Conference 2025.***
- **T193 module team** contacted with findings about multiple intersectional double disadvantages, and initial recommendations shared, autumn 2025.

Figures and tables

Table 2 Summary of Survey Response Rates from March 2025 & September 2025

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University approval processes

If your project required specific approval from university committees, please provide the appropriate information below. This is a necessary requirement for future publication of outputs from your project.

- SRPP/SSPP – Approval from the Student Research Project Panel/Staff Survey Project Panel was obtained according to the Open University's

code of practice and procedures before embarking on this project. Application number 2024/2984.

- Ethical review – An ethical review was obtained according to the Open University's code of practice and procedures before embarking on this project. Reference number HREC/2025/0651-3.
- Data Protection Impact Assessment/Compliance Check – A Data Protection Impact Assessment/Compliance Check was obtained according to the Open University's code of practice and procedures before embarking on this project. Data Protection registration number 1197-2024.

Appendix

Appendix C Interview questions

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