



PTAS Project Report (for REGULAR PROJECT GRANTS)

Project Title: Researching Widening Participation (WP) in Engineering

Project type (delete as appropriate) :

A Research Project (research focus on particular dimension of teaching, learning, assessment)

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Schools/department : School of Engineering

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Project teams must submit a report within 4 months of the conclusion of their project.

Copies of dissemination material (eg journals/newsletter articles, conference papers, posters should be listed and attached (separate to the word count). The brief report will be published on the IAD web pages.

Report (maximum 1500 words)

The School of Engineering is developing a coherent WP support strategy that covers all aspects of student experience. To develop this Engineering specific strategy, a thorough understanding of the experience, challenges and barriers facing our existing WP cohort is essential. Access to empirical facts and data about our WP students is a gateway to planning an effective support strategy for this group of students. These are the motivations for this PTAS project. In this study, we recruited and worked with WP and non-WP students from our School to understand and compare their experience and challenges, identify areas where they most need additional support and consider how that support can be tailored to enhance their experience in the School.

We used survey and focus group discussions as the main methods of collecting data. These were tested and co-developed with our recruited student volunteers. The privacy of participants was protected, all data and information collected were anonymised, and every participant signed a consent form to participate in the study.

We surveyed the entire UG (MSc Taught included) student population of our School. Widening access student respondents were identified using the same indicators used by the centre University recruitment and admission team (i.e. those that are refugees or asylum seekers, receive study financial support, care-experienced background, completed a [SWAP](#) course, or from a [LEAPS](#) School).

We then organised eight discussions in small groups of 4-6 students where we expanded on topics identified as significant from the survey analysis. The first two groups consisted of our recruited volunteer students (a mix of WP and non-WP students (NWP)), who tested, refined and co-developed the focus group questions before rolling them out to the next six groups (1 mixed, 2 NWP-only, 3 WP-only groups).

We analysed our data qualitatively using thematic analysis, looking for common themes (and subthemes) in the responses, to draw our conclusions and recommendations to enhance learners' experience. Finally, we shared our recommendations with our student volunteers for their feedback.



Overall, WP students in our study reported lower satisfaction with their studies-life balance. Below are some factors this group of students identified as being responsible for their dissatisfaction.

Difficulty Integrating and Engaging with SoE Community - WP students are less satisfied with the relationships they form because they do not have enough time or opportunities to socialise with other students. They are less likely to engage with such extracurricular activities such as student-led societies/sports and clubs; thus missing vital opportunities to engage/interact/socialise with their fellow students. According to our results, WP students are more likely to have a paid job “to pay for essential living costs”, this seems to make them less likely to afford the joining fee and the time to participate in student societies and clubs. Other reasons why they are less likely to engage with the SoE community include the fact that WP students are more likely to live with their parents, and the fact that there are not enough social-mixing opportunities on our King’s Buildings campus.

For similar reasons, but also due to staff related factors that include limited office hours, slow response to emails/query, and perceived lack of relevant training for staff, WP students reported:

- lack of meaningful relationships with teaching staff and their personal tutors (PT).
- Difficulties finding additional support when needed.

Difficulty with Deadlines and Extensions - WP students are more likely to apply for extensions due to special/extreme circumstances during their studies. In addition, our WP participants are not satisfied with how the special circumstance process is managed by the university and the impact this has on their studies/experience. In particular, the length of time the decision process takes. Moreover, the fact that PT cannot help with special circumstances. The students mentioned they would prefer to discuss their circumstance with someone at first prior to applying for special circumstance. This they say is to gauge if their application will be eligible.

Workload Complaint - WP students also struggle to manage their academic workload for a variety of reasons that include paid work. They specifically discussed the transition from school to university as being a challenge due to their lack of formal knowledge/experience of what studying for an academic degree in a University entails. This is worse for those that say they are first in their family to attend a university or because of no previous exposure to the subject of their studies or university life. In the same discussion, they complained about how their *perceived* lack of background knowledge is creating workload problems and difficulty following/enjoying specific courses.

Overall, WP students in our study reported lower satisfaction with their studies-life balance than their non-WP counterpart.

Based on the study, we made the following recommendations:

Enhanced Transition Support/Activities - In order to address potential gaps in WP students’ experience, knowledge about university life and engineering as a subject of studies, the School needs to consider exploring enhanced pre-sessional support to incoming and prospective students to aid their transition. Examples could include “learning to learn” activities, University life/expectations as told by current students and confidence building strategies. Possibly current students can be involved to share their experiences and highlight the benefits of the non-academic opportunities offered by the School and the University.

Other recommendations under this include:

- WP matters awareness for staff – this relates to staff being aware of WP students perception that they might not have the pre-requisite background knowledge or that there might be gaps



in their knowledge. This might be unfounded but just an issue of confidence or impostor syndrome.

- Continue/promote extra-academic support (e.g. in Engineering Maths) to first year students (especially when they have not studied Advanced Highers, or if they have a gap between leaving school and coming to university).

Pastoral care and additional support - Since the University is already in the process of implementing the new Student Support Model to improve pastoral and additional support for all students, we recommend to the School to focus on exploring alternative ways of supporting WP students, who may have more complex needs than others. For example, a mentoring scheme that offers the possibility to match them with fellow students or academics of a similar background might make them feel more comfortable and request support when in need of one. *This recommendation is based on feedback from WP students who had a good experience with their PT and believed that the reason was that their PT had a similar background and/or common interests with them.*

Special Circumstances Process - The University should improve the process of applying for extensions due to special/extreme circumstances. The students will like to see clarifications around what issues are eligible/qualify as special circumstance and what the role of the PT (or equivalent) should be in this process. Similarly, the students want a clearer University system (and awareness for staff and students) around support services offered by the University, what each service offers, and the procedure for seeking these services. Doing so will it make it quick and easy for students to access these services if/when required.

Community building and Work-Life balance - To increase the opportunities for socialising and extracurricular activities for students on the KB campus, we recommend working with EUSA (Edinburgh University Student Association) and the College of Science and Engineering on this. Other things to consider are the cost of joining societies, timetable issues for sports clubs and societies, as well as more community building areas and activities on KB campus.

It is also worth exploring the option of allocating credits to student led activities/societies. In other words, finding a way to embed extracurricular into the curriculum. A relevant example to look at is the *Informatics Experiential Learning Course*; some of the participants suggested this as well.

What did you do?

We used survey and focus group discussions as the main methods of collecting data. These were tested and co-developed with our student recruits, where possible. The privacy of participants was protected and all data/information collected were anonymised. All the participants signed a consent form prior to their participation in our study.

After we tested our survey questions with our recruited student volunteers and improved it based on their feedback, our survey was then shared with the entire UG (MSc Taught included) student population of our School. In the study, we used WP indicators (if they are a refugee or asylum seeker, the financial support they receive for their studies, if they have care-experienced background, if they have completed a SWAP course, and if they have attended a LEAPS School) that helped us identify WP students-respondents. From the analysis of the survey data, we identified areas that needed to be further explored through Focus Group discussions. We organised eight discussions in small groups of four-six students, where we expanded on topics highlighted as significant from the survey analysis. The first two groups consisted of our recruited student volunteers and they were mixed



groups of WP and non-WP students. Based on their responses and feedback, we then slightly changed the order and wording of our questions/discussion points that we used for the rest of the six groups (one mixed, two NWP-only, three WP-only groups).

The questionnaire responses and Focus Group discussion transcripts were mainly analysed qualitatively. Specifically, we used thematic analysis looking for common themes (and subthemes) in the responses to the various discussion categories we included in our survey and Focus Groups, which helped us draw our conclusions and shape our recommendations in a more concrete way. Finally, we shared our recommendations with our recruited students asking for their feedback.

What did you find out?

All students (WP and NWP) in our study expressed some common concerns around their student experience. The workload was the number one concern of all students who described it as “unrealistic”, “demanding” and “unevenly distributed”, and mentioned it as the main reason for considering quitting their studies. Most students struggle to find time to engage with extracurricular activities such as societies and sports, which they all believe are crucial for their mental health and for socialising. This has a huge negative impact on their work-life balance and their student experience as a whole, especially when students also want or need to have paid jobs during the academic year, which more often affects WP students. WP students also specifically discussed the transition from school to university as being a challenge due to their lack of formal knowledge/experience of what studying for an academic degree in a University entails. This is worse for those that say they are first in their family to attend a university or because of no previous exposure to the subject of their studies or university life. In the same discussion, they complained about how their perceived lack of background knowledge is creating workload problems and difficulty following/enjoying specific courses

Perception of inconsistency in teaching quality, teaching staff competency, staff interest in teaching and in providing quality academic guidance to students was one of the main topics of discussion by most of the students from both groups (WP and NWP). The students highlighted their concerns about:

- delay in receiving or the complete lack of feedback on their coursework or their grades.
- Negative impact of the above on their academic development and their confidence to ask for feedback.

Most students also expressed frustration about:

- lack of clarity on the correlation between course credit and the amount of work needed for some courses.
- Lack of hands-on experience on some courses/degrees.
- Quality of group work.
- Lack of connection of what they learn to real life applications.

The discussions led to students raising concerns about their career progression in engineering and expressed strong desire for more engagement with and support from the career services.

The students also pointed to variations in academic, pastoral, and additional support offered by the School, with the majority of them finding it difficult to identify and receive the appropriate support for their various needs.

- Most students described their relationship with their PT as ‘typical’, ‘useless’, and ‘meaningless’.
- They expressed concerns about the lack of awareness of other student support services and the delay in receiving support when they actually need it.



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- Those with positive experience with their PT say it is often up to the students to reach out to their PTs, which is something they would like to see improved.

In addition, our WP participants, who are more likely to apply for extensions due to special/extreme circumstances during their studies, are not satisfied with how the special circumstance process is managed by the university and the impact this has on their studies/experience. In particular, the length of time the decision process takes. Moreover, the fact that PT cannot help with special circumstances. The students mentioned they would prefer to discuss their circumstances with someone first prior to applying for special circumstance. This they say is to gauge if their application will be eligible.

Finally, WP students in our study reported lower satisfaction with their studies-life balance. Specifically, they are less satisfied with the relationships they form because they do not have enough time or opportunities to socialise with other students. They are less likely to engage with such extracurricular activities such as student-led societies/sports and clubs; thus, missing vital opportunities to engage/interact/socialise with their fellow students. As mentioned earlier, WP students are more likely to have a paid job (“to pay for essential living costs”), which seems to make them less likely to afford the cost joint and the time to participate in student societies and clubs. Other reasons why they are less likely to engage with the SoE community include the fact that WP students are more likely to live with their parents, and the fact that there are not enough social-mixing opportunities on our King’s Buildings campus.

How did you disseminate your findings?

- The study, together with its findings, was presented orally at the Edinburgh University Learning & Teaching Conference 2022. This generated a lot of interest and follow on discussion from colleagues in other School/Colleges across the University
- Based on the above findings and recommendation, we prepared an action plan. This plan was co-developed with our Director of Learning and Teaching, who is also a member of the project. This plan contains the recommendations, what, how and who is expected to take each recommendation forward and implement them. A copy of the project report and the action plan are attached.
- The above project report, recommendations and action plans will be presented to the School of Engineering Learning and Teaching Committee at the start of the 2022/23 session. Thereafter, it will be presented to the School Senior Management Committee for consideration and approval of any resources needed to implement the action plan.
- There is plan to share our findings widely within our College and the University. To achieve this, we will be sending the project report, recommendations and action plans to:
 - the College of Science and Engineering’s Dean of Systematic Inclusion.
 - the central University widening participation team
 - consider writing this as an article/post on the University’s ‘Teaching Matters’ blog

What have been the benefits to student learning?



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- One clear benefit is the 'support to succeed' initiative that has benefitted first year WP students. We now offered extra free tuition in Engineering Maths to first year WP students that signed up for it. As a result, some of the first year SWAP students that were considering quitting the University stayed on.
 - Another outcome is that we will now be providing awareness/training for academic staff on WP matters and hidden curriculum. This is being done in conjunction with Dr Neil Speirs (University's Widening Participation Manager).
 - On successful implementation of the recommendations, we expect an enhancement of WP and non-WP student experience in the School of Engineering.

How could these benefits be extended to other parts of the university?

- Sharing the project findings/recommendations and action plans to WP leads in other School/Colleges/University at large as detailed above.
 - By engaging with similar WP initiative across the University and EUSA
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Financial statement (please delete as appropriate):

This project has utilised the funding awarded to it by the PTAS adjudication committee and the Principal Investigator or School Administrator appropriate can provide financial statements showing the funding usage as and when required by the UoE Development Trusts who may require it for auditing purposes.

Please send an electronic PDF copy of this report to:

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