Access to UWE Bristol: Summer School Evaluation

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Background

As part of our 2024/25-2027/28 Access and Participation Plan, we evaluated the 2024 Summer School for contextual offer holders (COH). This forms part of Intervention Strategy 1: Widening Access and Raising Attainment, with the objective of reducing the gap in access between students from IMD Q5 and IMD Q1.

COH are given the opportunity to attend a Summer School which takes place across 4 days on Frenchay campus and gives COH the chance to experience university life before results day: staying in UWE accommodation, attending talks and workshops, and building social networks. The Summer School forms part of a larger package of support for COH which includes comms, webinars and preparing for HE talks.

We evaluated the impact of the Summer School on participants' university preparedness (defined as academic self-efficacy), sense of belonging, knowledge and confidence in utilising UWE support services, and knowledge of managing finances as a student. Our evaluation uses a quasi-experimental design with before and after assessment and difference-in-difference analysis.

Executive Summary

Abbreviations:

- COH: contextual offer holders
- IG: intervention group i.e. Summer School attendees
- CG: comparison group i.e. COH who did not attend Summer School

Our analysis found that attendance at the Summer School was associated with **positive, short-term improvements across sense of belonging, knowledge and confidence, and had an impact on enrolment**. Key findings include:

- Statistical analysis of pre and post surveys found that IG showed a **statistically significant improvement** in sense of belonging and knowledge and confidence at the end of the Summer School compared to the start, with **medium to very large effect sizes** across these two areas. This suggests that the **Summer School is associated with tangible improvements** in these areas in the **short term**.
- A survey-item level Difference-in-Difference analysis found that two survey items showed significantly higher odds that IG would select improved answers in the post survey. These results suggest **a potential causal effect** of the Summer School, particularly in **improving participants' knowledge of support available at university and confidence seeking support**.
- Logistic regression found that **IG have approximately 6-8 times higher odds of enrolling** at UWE compared to CG, even when accounting for some baseline differences. This suggests that **attendance at the Summer School** is associated with **higher enrolment rates** of COH.

Academic self-efficacy appears to **impact COH's self-selection to attend** the Summer School. Our analysis of pre survey responses suggests that:

- IG came to the Summer School with overall lower pre survey scores across all scales compared to CG, with significantly lower confidence that they can manage with university level study.

- However, IG were more confident that they could achieve the grades required for university entry compared to CG.
- This suggests that **COH are more likely to self-select to attend** the Summer School if they have **overall low academic self-efficacy** but are **more confident** that they will enter university.

We also aimed to establish **longer-term impacts**, and found **some positive trends** but ultimately **no conclusive findings**, largely due to sample size limitations:

- Follow-up surveys were administered and summary statistics found that IG participants reported higher levels of knowledge about available support and greater social integration than CG. This suggests that **overall IG may retain some relative advantage compared to CG**. However, when comparing the follow-up survey scores of IG with their own pre and post survey scores, there do not appear to be consistent, sustained changes three months post Summer School. This may indicate that the **short-term benefits of the Summer School diminish over time**, at least in the absence of ongoing support.
- Focus groups taking place three months after found that the **Summer School appears to have a strong social benefit** for students who attend, although this varies between individuals and is limited by a very small sample size.
- Analysis of **continuation rates** between IG and CG who enrolled at UWE shows **no statistically significant differences** although IG have higher continuation rates. This is limited by small sample sizes.
- Analysis of academic attainment at the end of their first year at UWE found that **IG** who enrolled at UWE had **slightly higher pass rates** but slightly lower weighted average marks than CG. However, these **differences were not statistically significant**.

Due to sample size limitations, we are unable to conclude whether the Summer School has a direct impact on improving access for students from IMD Q1, although our participants were overrepresented for IMD Q1 compared to the general UWE population.

Overall, we can conclude that the Summer School has a positive impact on COH who take part and may play a role in driving COH enrolment at UWE.

Method Summary

In August 2024, participants took part in two surveys, which consisted of the same questions: TASO academic self-efficacy scale, TASO sense of belonging scale, and an internally developed knowledge and confidence scale developed and utilised by the Widening Access Team to evaluate the pilot Summer School taking place in 2023.

The 2024 Summer School took place from 5th-8th August, and attendees were given a pre Summer School survey on the first day and a post-Summer School survey on the last day. Only the responses of those who had filled in both pre and post survey were taken for analysis, and these participants formed our intervention group (IG).

A comparison group (CG) was constructed of contextual offer holders (COH) who joined the WA Team mailing list but were not attending the Summer School. An initial survey (pre) was sent out to all mailing list members (562 COH) in the week prior to the Summer School (29th Jun-5th Aug). All those who completed the pre survey (61) were emailed a second survey (post) in the week after the Summer School (8th-15th Aug) of which the first 50 responses

were taken for analysis, forming our CG. Due to logistical constraints, we had to limit the number of survey responses for both pre and post surveys, meaning that we had to close the CG pre survey when we had received around 60 responses, and close the post survey when we had received 50 responses.

For both groups, we also constructed a difference score (Diff = Post – Pre), which was used throughout analysis.

In November 2024, IG and CG were emailed a follow-up survey which contained the same questions as the pre and post surveys. The follow-up survey was completed by 10 IG and 27 CG participants. Similar to the pre and post surveys, we calculated difference scores (DiffFoltoPre= Follow-up – Pre; DiffFoltoPost = Follow-up – Post) scores to measure distance travelled between each survey stage.

In November also, participants were invited to take part in focus groups, one for IG and one for CG. Each focus group had only two participants attend.

Enrolment data, continuation and module attainment data were collected to capture differences in academic outcomes between IG and CG. These outcomes (enrolment, continuation, attainment) were analysed via a variety of statistical methods to understand the longer-term impact of the Summer School on academic outcomes.

Limitations and design considerations

This study's biggest limitation is sample size, with only 22 IG participants affecting the generalisability of the findings. Further research would be needed to establish whether our conclusions hold with a different, larger sample.

Our sampling for CG was constrained by logistical and financial limits, as we incentivised COH engagement with a voucher prize. This required us to cap responses at the first 50 post-survey completions. This introduces potential time-of-response bias, as more engaged students may have responded earlier. CG scores may therefore differ from the broader COH population.

As participants self-selected to attend the Summer School our results are also limited by selection bias, meaning scores may differ from the broader population.

Due to sample size limitations, it has also not been possible for us to conduct detailed demographic analysis or compare outcomes such as survey scores, enrolment, or attainment between different demographic groups. As a result, we cannot be sure that the Summer School has a direct impact on students from IMD Q1 or Q2, although our participants across both IG and CG were overrepresented for these quintiles compared to the general UWE population.

We did not apply formal multiple-comparison corrections (e.g. False Discovery Rate), so some significant results, particularly those near the 0.05 threshold, should be interpreted with caution.

Although Likert items are ordinal, we report means and 95% confidence intervals as approximate interval-level summaries to aid interpretability, but these should be considered descriptive rather than strictly parametric.

Some data collection and analysis methods had specific limitations, which are summarised in the sections below.

Participants and Demographics

Participants had to complete both a pre and post survey for their response to be counted in the analysis. 27 Summer School attendees completed the pre survey and 22 completed both surveys. Of the 562 COH who were emailed the pre survey, 61 completed the survey and these were subsequently emailed the post survey. The first 50 responses for the post survey were taken for analysis. The survey for non-attendees was incentivised with a £50 voucher.

Table 1

Total number of valid responses for IG and CG in pre and post surveys

IG	CG
22	50

Majority of respondents across both IG and CG were:

- under 21 years old (not mature students)
- not from IMD Q1 or IMD Q2
- women
- declared a disability
- White
- have at least one parent, guardian or primary caregiver who has a HE qualification
- attended a state-run/state-funded school.

However, compared to UWE applicant demographics for (Sept entry, new participants, not Clearing) for the same year of entry (2024/25), both IG and CG were overrepresented for IMD Q1/IMD Q2, women, disability and Global Majority compared to the general UWE applicant population.

Since disability, ethnicity and home postcode are factors that influence eligibility for a contextual offer, they may partially explain the overrepresentation in these areas, though they might not be the only contributing factors.

Table 2

Demographic breakdown of IG and CG showing number and percentage and UWE totals. Respondents who opted-out of providing demographic information have been removed from totals.

Group	IG		CG		UWE
	n	%	*n*	%	% 23/24
Age					
Young	12	70.6	31	79.5	86.6
Mature	5	29.4	8	20.5	13.4
IMD					
IMD Q1 - 2	5	35.7	12	36.4	29.8
IMD Q3 -5	9	64.3	21	63.6	70.2
Gender [a]					
Woman	14	70.0	31	63.3	56.3

Man	4	20.0	14	28.6	43.7
Non-Binary & Other	2	10.0	4	8.2	-
Disabled status					
Non-disabled	6	35.3	15	38.5	27.9
Disabled	11	64.7	24	61.5	72.0
Disability Type [b]					
Not disabled	6	23.1	15	38.5	-
SpLD	4	15.4	5	12.8	-
MH condition	6	23.1	11	28.2	-
Physical impairment	1	3.8	4	10.3	-
Long-term ill/health	3	11.5	5	12.8	-
Neurodiversity	6	23.1	11	28.2	-
Other	0		1	2.6	-
Ethnicity					
White	14	73.7	36	72.0	75.2
Asian or Asian British	1	5.3	7	14.0	8.1
Black or Black British	4	21.1	4	8.0	7.7
Multiple Heritage	0		3	6.0	7.0
Other	0		0		2.0
Ethnicity Grouping					
White	14	73.7	36	72.0	74.2
Global Majority	5	26.3	14	28.0	24.5
Parents' HE qualification [c]					
Parent/s have HE qualification	13	65.0	23	47.9	-
Parent/s don't have HE qualification	7	35.0	25	52.1	-
School type					
State school	13	76.5	44	93.6	-
Independent/Fee paying	1	5.9	2	4.3	-
Other	3	17.6	1	2.1	-

[a] UWE data only provides sex (male/female) rather than gender.
[b] Some participants declared more than one disability type, so totals exceed the total number of valid respondents for each study group. As UWE data has a separate category for students who declare multiple disabilities, we cannot directly compare study proportions to UWE data.
[C] There are no measures of parent's HE qualification or school type in UWE data.

Pre and Post Survey Analysis Summary

For the pre and post survey analysis, we ran tests focused on the following evaluation questions:

1. To what extent is there a difference in academic self-efficacy, sense of belonging and knowledge and confidence before and after attending the Summer School?
    - Wilcoxon signed rank test comparing pre and post scores for each group
2. To what extent is there a difference between attendees' and non-attendees' scores for each of the questions and for each stage (pre, post, diff)?
    - Mann Whitney U test comparing IG scores and CG scores

3. Is there any difference between different demographic groups diff scores? If so, which demographic groups and which study groups (IG or CG)?
    - Mann Whitney U tests or Kruskal Wallis tests depending on groups being tested (e.g. comparing the responses of disabled participants and non-disabled participants in IG: Mann Whitney U; comparing the responses of White, Asian, Black and Multiple Heritage in CG: Kruskal Wallis)

Key Findings

Evaluation Question 1: To what extent is there a difference in academic self-efficacy, sense of belonging and knowledge and confidence before and after attending the Summer School?

Tests were run to determine if there was a significant difference between pre and post scores for each question and for each of the two study groups. We conducted these tests to understand what differences are present before and after attending the Summer School.

There is a statistically significant difference between pre and post scores for IG for all sense of belonging, and all knowledge and confidence questions, with medium, large or very large effect sizes observed for all these questions (Table 3). Knowledge of support available at university (z = 3.981, p <.001, r = 0.849, Wilcoxon Signed Rank Test) and knowledge of how to access support at university (z = 3.531, p <.001, r = 0.753, Wilcoxon Signed Rank Test) both showed large or very large, significant improvements after attendance at the Summer School. IG also saw large, significant improvements in academic sense of belonging (z = 2.500, p = 0.012, r = 0.533, Wilcoxon Signed Rank Test), confidence in managing finances (z = 2.919, p = 0.004, r = 0.622, Wilcoxon Signed Rank Test), and ability to navigate student life (z = 2.701, p = 0.007, r = 0.576, Wilcoxon Signed Rank Test). Slightly smaller but still significant improvements were observed in IG participants' perception that university is for people like them (z = 1.968, p = 0.049, r = 0.420, Wilcoxon Signed Rank Test) and their social sense of belonging (z = 2.235, p = 0.025, r = 0.477, Wilcoxon Signed Rank Test). All this suggests that attendance at the Summer School is associated with significant improvements in prospective sense of belonging, knowledge of support, confidence managing money and perceived ability to navigate student life. **Thus, Summer School attendance appears to have a significantly large positive impact on COH who attend.**

There were no statistically significant differences observed between pre and post scores for academic self-efficacy questions in IG, and no significant differences observed for CG. The latter was expected as CG did not receive any intervention between the pre and post surveys.

On average across all scales, IG showed greater increases in pre to post scores compared to CG (Table 4). The largest improvements were observed in the knowledge and confidence questions. IG scores increased by more than one scale point on average for knowledge of support available (M = 1.18, *95% CI* [.86, 1.51]) and by one scale point on average for knowledge of how to access support (M = 1.00, *95% CI* [.59, 1.41]). **This suggests that COH attending the Summer School could expect to see approximately one scale point improvement (e.g. moving from neutral to agree) for their knowledge of support and knowledge of how to access support at university.**

Table 3

Wilcoxon Signed Rank Test comparing pre and post scores for each question for IG and comparing pre and post scores for each question for CG

Question	Intervention Group (IG)					Comparison Group (CG)				
	z	*p*	*r*	Significant	Effect size	*z*	*p*	*r*	Significant	Effect size
TASO Academic Self-Efficacy Scale										
I am confident that I can get the exam results required to progress to university.	-1.265	0.206	-0.270	No	Small	-1.324	0.185	-0.187	No	Small
I have the academic ability to do well at university.	0.432	0.666	0.092	No	Very small / no effect	0.333	0.739	0.047	No	Very small/ no effect
I could manage with the level of study required at university.	1.658	0.097	0.354	No	Medium	-0.943	0.346	-0.133	No	Small
TASO Sense of Belonging Scale										
University is for people like me.	1.968	0.049	0.420	Yes	Medium	1.188	0.235	0.168	No	Small
I would fit in well academically with others at university.	2.500	0.012	0.533	Yes	Large	0.728	0.467	0.103	No	Small
I would fit in well socially with others at university.	2.235	0.025	0.477	Yes	Medium	0.699	0.485	0.099	No	Very small / no effect
WA Team Knowledge and Confidence Scale										
I am confident about how to manage money and finances as a student.	2.919	0.004	0.622	Yes	Large	1.548	0.122	0.219	No	Small
I know what support is available at university.	3.981	<0.001	0.849	Yes	Very large	0.137	0.891	0.019	No	Very small / no effect
I know how to access support available at university.	3.531	<0.001	0.753	Yes	Large	1.237	0.216	0.175	No	Small
I have the skills and abilities to navigate student life whilst studying.	2.701	0.007	0.576	Yes	Large	1.198	0.231	0.169	No	Small

Effect size thresholds: small ~ 0.10, medium ~ 0.30, large ~ 0.50, very large > 0.70

Table 4.

Summary of mean (M) and 95% confidence intervals (CI) for pre, post and diff scores for each question. IG and CG are both shown below and red shading in the IG column indicates where a mean is lower than CG, green shading where a mean is higher than CG

Question	Stage	IG *M*	IG 95% CI *LL*	IG 95% CI *UL*	CG *M*	CG 95% CI *LL*	CG 95% CI *UL*
Overall							
Overall mean TASO Academic Self-Efficacy scores	**PRE**	**4.00**	3.75	4.25	**4.09**	3.95	4.23
	POST	**4.03**	3.62	4.44	**4.02**	3.86	4.18
	DIFF	**0.03**	-0.34	0.40	**-0.07**	-0.19	0.05
Overall mean TASO Sense of Belonging scores	**PRE**	**3.73**	3.42	4.04	**3.76**	3.58	3.94
	POST	**4.18**	3.95	4.41	**3.85**	3.66	4.05
	DIFF	**0.45**	0.14	0.77	**0.09**	-0.05	0.24
Overall mean WA Team Knowledge and Confidence scores	**PRE**	**3.26**	2.95	3.57	**3.52**	3.34	3.70
	POST	**4.14**	3.94	4.33	**3.64**	3.43	3.85
	DIFF	**0.88**	0.59	1.16	**0.12**	-0.04	0.28
TASO Academic Self-Efficacy Scale							
I am confident that I can get the exam results required to progress to university.	PRE	4.45	4.10	4.81	3.96	3.72	4.20
	POST	4.18	3.68	4.69	3.80	3.53	4.07
	DIFF	-0.27	-0.71	0.16	-0.16	-0.41	0.09
I have the academic ability to do well at university.	PRE	4.00	3.69	4.31	4.22	4.04	4.40
	POST	4.05	3.65	4.44	4.24	4.04	4.44
	DIFF	0.05	-0.40	0.49	0.02	-0.10	0.14
I could manage with the level of study required at university.	PRE	3.55	3.19	3.90	4.10	3.96	4.24
	POST	3.86	3.45	4.28	4.02	3.82	4.22
	DIFF	0.32	-0.05	0.69	-0.08	-0.25	0.09
TASO Sense of Belonging Scale							
University is for people like me.	PRE	3.91	3.52	4.29	3.76	3.51	4.01
	POST	4.32	4.07	4.57	3.88	3.63	4.13
	DIFF	0.41	0.01	0.81	0.12	-0.08	0.32
I would fit in well academically with others at university.	PRE	3.73	3.36	4.09	3.82	3.62	4.02
	POST	4.18	3.89	4.48	3.88	3.68	4.08
	DIFF	0.45	0.13	0.78	0.06	-0.11	0.23

I would fit in well socially with others at university.	PRE	3.55	3.12	3.97	3.70	3.45	3.95
	POST	4.05	3.67	4.42	3.80	3.55	4.05
	DIFF	0.50	0.07	0.93	0.10	-0.17	0.37
WA Team Knowledge and Confidence Scale							
I am confident about how to manage money and finances as a student.	PRE	3.18	2.74	3.63	3.34	3.03	3.65
	POST	3.77	3.41	4.13	3.56	3.27	3.85
	DIFF	0.59	0.27	0.92	0.22	-0.06	0.50
I know what support is available at university.	PRE	3.32	2.97	3.66	3.64	3.36	3.92
	POST	4.50	4.24	4.76	3.64	3.36	3.92
	DIFF	1.18	0.86	1.51	0.00	-0.27	0.27
I know how to access support available at university.	PRE	3.14	2.74	3.53	3.38	3.08	3.68
	POST	4.14	3.85	4.42	3.50	3.21	3.79
	DIFF	1.00	0.59	1.41	0.12	-0.08	0.32
I have the skills and abilities to navigate participant life whilst studying.	PRE	3.41	2.94	3.88	3.72	3.50	3.94
	POST	4.14	3.98	4.29	3.86	3.65	4.07
	DIFF	0.73	0.27	1.18	0.14	-0.08	0.36

Evaluation Question 2: To what extent is there a difference between attendees' and non-attendees' scores for each of the questions and for each stage (pre, post, diff)?
For the previous evaluation question, we compared pre and post scores within IG and within CG. To test evaluation question 2, we conducted tests to compare IG scores to CG scores. Specifically, we compared IG and CG scores at all three time points: IG pre scores with CG pre scores, IG post scores with CG post scores, and IG diff scores with CG diff scores. These tests were conducted to better understand where specific, significant differences may exist between IG and CG.

Although some significant differences were found, they primarily echoed the findings described above, that attendance at the Summer School is associated with significant improvements in most questions (see Tables 5b-c). However, two notable findings emerged when comparing pre scores for academic self-efficacy between IG and CG (Table 5a).

Firstly, IG showed a significant moderate difference in confidence that they could achieve the exam results required to progress to university compared to CG ($z = 2.644$, $p = 0.008$, $r = 0.312$, Mann Whitney U Test). IG were more likely to believe they would get the necessary exam results to progress to university than CG. **This could suggest that COH are more likely to self-select to attend the Summer School if they believe they have a higher chance of getting the required grades for university admission**.

Secondly, CG scored significantly higher than IG participants, with a moderate effect size, in confidence that they could manage university-level study ($z = -3.285$, $p = 0.001$, $r = 0.387$, Mann Whitney U Test). **This suggests that COH may be less likely to self-select for the Summer School if they already feel confident in their ability to handle university-level work.**

These findings thus suggest that academic self-efficacy plays a significant role in COH's decisions to attend the Summer School. **COH who are confident they can achieve the required grades but feel less confident in their ability to manage university-level study may be more likely to self-select to attend the Summer School**.

Table 5a

Summary of Mann Whitney U Test comparing IG pre scores and CG pre scores for each question

Question	*z*	*p*	*r*	Significant	Effect size
TASO Academic Self-Efficacy Scale					
I am confident that I can get the exam results required to progress to university.	2.644	0.008	0.312	Yes	Medium
I have the academic ability to do well at university.	-1.381	0.167	-0.163	No	Small
I could manage with the level of study required at university.	-3.285	0.001	-0.387	Yes	Medium
TASO Sense of Belonging Scale					
University is for people like me.	0.767	0.443	0.090	No	Very small/ no effect
I would fit in well academically with others at university.	-0.698	0.485	-0.082	No	Very small/ no effect
I would fit in well socially with others at university.	-0.676	0.499	-0.080	No	Very small/ no effect
WA Team Knowledge and Confidence Scale					
I am confident about how to manage money and finances as a student.	-0.581	0.561	-0.068	No	Very small/ no effect
I know what support is available at university.	-1.272	0.203	-0.150	No	Small
I know how to access support available at university.	-0.911	0.363	-0.107	No	Small
I have the skills and abilities to navigate student life whilst studying.	-0.997	0.319	-0.117	No	Small

Table 5b

Summary of Mann Whitney U Test comparing IG post scores and CG post scores for each question

Question	*z*	*p*	*r*	Significant	Effect size
TASO Academic Self-Efficacy Scale					
I am confident that I can get the exam results required to progress to university.	2.026	0.043	0.239	Yes	Small
I have the academic ability to do well at university.	-0.790	0.429	-0.093	No	Very small/ no effect
I could manage with the level of study required at university.	-0.453	0.651	-0.053	No	Very small/ no effect
TASO Sense of Belonging Scale					
University is for people like me.	2.001	0.045	0.236	Yes	Small
I would fit in well academically with others at university.	1.874	0.061	0.221	No	Small
I would fit in well socially with others at university.	1.144	0.253	0.135	No	Small
WA Team Knowledge and Confidence Scale					
I am confident about how to manage money and finances as a student.	0.868	0.385	0.102	No	Small
I know what support is available at university.	3.617	0.000	0.426	Yes	Medium
I know how to access support available at university.	2.546	0.011	0.300	Yes	Medium

I have the skills and abilities to navigate student life whilst studying.	1.618	0.106	0.191	No	Small

Table 5c

Summary of Mann Whitney U Test comparing IG diff scores and CG diff scores for each question

Question	*z*	*p*	*r*	Significant	Effect size
TASO Academic Self-Efficacy Scale					
I am confident that I can get the exam results required to progress to university.	-0.008	0.994	-0.001	No	Very small/ no effect
I have the academic ability to do well at university.	0.593	0.553	0.070	No	Very small/ no effect
I could manage with the level of study required at university.	2.475	0.013	0.292	Yes	Small
TASO Sense of Belonging Scale					
University is for people like me.	1.493	0.136	0.176	No	Small
I would fit in well academically with others at university.	2.506	0.012	0.295	Yes	Small
I would fit in well socially with others at university.	1.781	0.075	0.210	No	Small
WA Team Knowledge and Confidence Scale					
I am confident about how to manage money and finances as a student.	1.269	0.204	0.150	No	Small
I know what support is available at university.	4.762	0.000	0.561	Yes	Large
I know how to access support available at university.	3.952	0.000	0.466	Yes	Medium
I have the skills and abilities to navigate student life whilst studying.	2.051	0.040	0.242	Yes	Small

Effect size thresholds: small ~ 0.10, medium ~ 0.30, large ~ 0.50, very large > 0.70

Evaluation Question 3: Is there any difference between different demographic groups diff scores? If so, which demographic groups and which study groups (IG or CG)?
Tests were run to determine if there were any significant differences for various demographic groups across both CG and IG. These tests examined differences within each study group (e.g. between participants from state schools and independent schools within IG) as well as between the two study groups (e.g. comparing IG and CG participants from IMD Q1).

The analysis focused on proxy measures of socio-economic status namely: IMD, parents' HE qualifications, and school type. Few differences were found and those observed were severely limited by small sample sizes. Therefore, we have not included these findings in this summary, but they are available on request.

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Follow-up Surveys

For the follow-up surveys, we focused on analysing descriptive statistics and did not conduct any statistical tests. This was due to very low sample sizes which would have severely limited our tests and subsequent conclusions. Our key evaluation questions were:

- What differences are observed between pre, post and follow-up survey responses?
- To what extent is there a difference between IG and CG in the follow-up survey responses?

All 72 participants were emailed an invite to take part in the follow-up survey, which was open for one month and was incentivised with a £10 voucher. Although response rates were relatively high (around 50%) the total number of responses was relatively low.

Table 6

Total number of valid responses and response rates for IG and CG in follow-up surveys

Group	Number of responses	Response Rate
IG	10	45.5%
CG	27	54.0%

Key Findings

Evaluation Question 1: What differences are observed between pre, post and follow-up survey responses?
We calculated the following scores to explore changes over time:

- DIFF (Pre to Follow-up) = Follow-up score – Pre score. This score measures change from baseline to three months post-intervention.
- DIFF (Post to Follow-up) = Follow-up score – Post score. This score measures change between the immediate post-intervention and three months post-intervention.

Comparing DIFF (Pre to Follow-up), IG showed improvements of at least half a scale point in three of the four knowledge and confidence items: knowledge of support available (*M* = 1.10, *95% CI* [0.39, 1.81]), knowledge of how to access support (*M* = 1.00, *95% CI* [0.11, 1.89]) and confidence navigating student life (*M* = 0.50, *95% CI* [-0.82, 1.82]) (Table 7). These findings suggest average improvements of 0.50 to 1.10 scale points for IG three months after attending the Summer School compared to baseline scores. Conversely, CG did not

show meaningful changes in any of these areas, with no increase or decrease above half a scale point (Table 7). **This may suggest that participation in the Summer School is associated with improvements in knowledge and confidence in the long term compared to baseline.**

However, to more accurately assess impact, we also examined DIFF (Post to Follow-up) scores because DIFF (Pre to Follow-up) differences may mask initial post-intervention changes. IG showed a notable improvement in one area: academic self-efficacy, particularly confidence in achieving the grades to progress to university (*M* = 0.60, *95% CI* [-0.53, 1.73]) (Table 7). This is likely due to the timing of the follow-up survey which occurred after university enrolment. All other items showed small decreases of half a scale point or less, with the most notable decreases observed in feeling that university is for people like them (*M* = -0.50, *95% CI* [-1.01, 0.01]) and confidence navigating student life (*M* = -0.50, *95% CI* [-1.27, 0.27]) (Table 7). **These findings suggest that, by three months post-intervention, there were no large, sustained improvements in belonging or knowledge and confidence among IG participants**, although larger sample sizes would be needed to confirm these trends.

CG showed no substantial change in DIFF (Post to Follow-up) scores, with all changes under half a scale point.

Evaluation Question 2: To what extent is there a difference between IG and CG in the follow-up survey responses?

Comparing follow-up scores (Table 8) shows that IG scored higher than CG in some areas: fitting in socially at university than CG (IG: *M* = 3.90, *95% CI* [3.37, 4.43]; CG: *M* = 3.67, *95% CI* [3.29, 4.05]), knowing what support is available at university (IG: *M* = 4.10, *95% CI* [3.47, 4.73], CG: *M* = 3.81, *95% CI* [3.48, 4.14]) and knowing how to access support (IG: *M* =3.90, *95% CI* [3.04, 4.76]; CG: *M* = 3.63, *95% CI* [3.30, 3.96]). **This could suggest some longer-term benefit of the Summer School for COH to take part, particularly in awareness of support and feelings of social integration**, however larger sample sizes would be needed to confirm these trends.

Reconciling Findings

Taken together, the findings suggest a nuanced picture of the Summer School's impact. Within IG, improvements observed immediately after the Summer School do not appear to be consistently sustained three months later. This may indicate that the short-term benefits of the Summer School diminish over time, at least in the absence of ongoing support.

However, when comparing IG and CG at follow-up, IG participants report higher levels of knowledge about available support and greater social integration at university. This suggests that although individual improvements may taper off, participants who attended the Summer School still retain some relative advantage compared to their COH who did not attend.

These findings imply that while the Summer School alone may not produce long-term changes in all intended outcomes, it may still play a valuable role in equipping students with knowledge and skills that help them navigate the university environment more effectively than their peers. Additional follow-up or reinforcement activities may be necessary to sustain broader benefits over time.

Table 7

Summary of mean (M) and 95% confidence intervals (CI) for diff scores for each stage: DIFF (Pre to Post), DIFF (Pre to Follow-up), DIFF (Post to Follow-up). IG and CG are both shown below and green shading indicates where this is an increase of half a scale point or more (0.5 or greater).

Question	Stage	IG			CG		
		M	95% CI		*M*	95% CI	
			LL	*UL*		*LL*	*UL*
Overall							
Overall mean TASO Academic Self-Efficacy scores	**DIFF (Pre to Post)**	**0.03**	-0.34	0.4	**-0.07**	-0.19	0.05
	DIFF (Pre to Follow-up)	**0.17**	-0.43	0.76	**0.06**	-0.21	0.33
	DIFF (Post to Follow-up)	**0.33**	-0.77	1.44	**0.12**	-0.16	0.40
Overall mean TASO Sense of Belonging scores	**DIFF (Pre to Post)**	**0.45**	0.14	0.77	**0.09**	-0.05	0.24
	DIFF (Pre to Follow-up)	**0.03**	-0.59	0.65	**-0.01**	-0.30	0.27
	DIFF (Post to Follow-up)	**-0.40**	-0.80	0.00	**-0.12**	-0.37	0.12
Overall mean WA Team Knowledge and Confidence scores	**DIFF (Pre to Post)**	**0.88**	0.59	1.16	**0.12**	-0.04	0.28
	DIFF (Pre to Follow-up)	**0.70**	-0.01	1.41	**0.20**	-0.04	0.44
	DIFF (Post to Follow-up)	**-0.38**	-1.08	0.33	**0.01**	-0.22	0.24
TASO Academic Self-Efficacy Scale							
I am confident that I can get the exam results required to progress to university.	**DIFF (Pre to Post)**	-0.27	-0.71	0.16	-0.16	-0.41	0.09
	DIFF (Pre to Follow-up)	0.20	-0.46	0.86	0.22	-0.31	0.75
	DIFF (Post to Follow-up)	0.60	-0.53	1.73	0.41	-0.15	0.97
I have the academic ability to do well at university.	**DIFF (Pre to Post)**	0.05	-0.40	0.49	0.02	-0.10	0.14
	DIFF (Pre to Follow-up)	0.10	-0.31	0.51	0.04	-0.24	0.32
	DIFF (Post to Follow-up)	0.30	-0.77	1.37	-0.07	-0.36	0.21
I could manage with the level of study required at university.	**DIFF (Pre to Post)**	0.32	-0.05	0.69	-0.08	-0.25	0.09
	DIFF (Pre to Follow-up)	0.20	-0.80	1.20	-0.07	-0.42	0.27
	DIFF (Post to Follow-up)	0.10	-1.23	1.43	0.04	-0.32	0.39
TASO Sense of Belonging Scale							
University is for people like me.	**DIFF (Pre to Post)**	0.41	0.01	0.81	0.12	-0.08	0.32

	DIFF (Pre to Follow-up)	-0.30	-1.20	0.60	-0.07	-0.47	0.32
	DIFF (Post to Follow-up)	-0.50	-1.01	0.01	-0.15	-0.49	0.19
	DIFF (Pre to Post)	0.45	0.13	0.78	0.06	-0.11	0.23
I would fit in well academically with others at university.	**DIFF (Pre to Follow-up)**	0.00	-0.75	0.75	0.04	-0.28	0.36
	DIFF (Post to Follow-up)	-0.40	-0.90	0.10	-0.07	-0.36	0.21
	DIFF (Pre to Post)	0.50	0.07	0.93	0.10	-0.17	0.37
I would fit in well socially with others at university.	**DIFF (Pre to Follow-up)**	0.40	-0.29	1.09	0.00	-0.40	0.40
	DIFF (Post to Follow-up)	-0.30	-0.98	0.38	-0.15	-0.47	0.18
WA Team Knowledge and Confidence Scale							
	DIFF (Pre to Post)	0.59	0.27	0.92	0.22	-0.06	0.50
I am confident about how to manage money and finances as a student.	**DIFF (Pre to Follow-up)**	0.20	-0.74	1.14	0.22	-0.22	0.67
	DIFF (Post to Follow-up)	-0.40	-1.42	0.62	-0.19	-0.58	0.21
	DIFF (Pre to Post)	1.18	0.86	1.51	0.00	-0.27	0.27
I know what support is available at university.	**DIFF (Pre to Follow-up)**	1.10	0.39	1.81	0.19	-0.18	0.55
	DIFF (Post to Follow-up)	-0.40	-1.17	0.37	0.15	-0.23	0.52
	DIFF (Pre to Post)	1.00	0.59	1.41	0.12	-0.08	0.32
I know how to access support available at university.	**DIFF (Pre to Follow-up)**	1.00	0.11	1.89	0.30	-0.06	0.66
	DIFF (Post to Follow-up)	-0.20	-0.94	0.54	0.22	-0.13	0.57
	DIFF (Pre to Post)	0.73	0.27	1.18	0.14	-0.08	0.36
I have the skills and abilities to navigate participant life whilst studying.	**DIFF (Pre to Follow-up)**	0.50	-0.82	1.82	0.11	-0.26	0.48
	DIFF (Post to Follow-up)	-0.50	-1.27	0.27	-0.15	-0.43	0.14

Table 8

Summary of mean (M) and 95% confidence intervals (CI) for follow-up survey scores. IG and CG are both shown below and green shading indicates where IG is higher than CG, red shading indicates where IG is lower than CG.

Question	IG			CG		
	M	95% CI		*M*	95% CI	
		LL	*UL*		*LL*	*UL*
Overall						
Overall mean TASO Academic Self-Efficacy scores	**4.10**	3.76	4.44	**4.16**	3.95	4.37
Overall mean TASO Sense of Belonging scores	**3.80**	3.28	4.32	**3.79**	3.53	4.05
Overall mean WA Team Knowledge and Confidence scores	**3.80**	3.14	4.46	**3.75**	3.50	4.00
TASO Academic Self-Efficacy Scale						
I am confident that I can get the exam results required to progress To university.	4.40	4.03	4.77	4.19	3.82	4.55
I have the academic ability to do well at university.	4.20	3.90	4.50	4.26	4.02	4.49
I could manage with the level of study required at university.	3.70	3.11	4.29	4.04	3.78	4.29
TASO Sense of Belonging Scale						
University is for people like me.	3.70	3.02	4.38	3.74	3.38	4.10
I would fit in well academically with others at university.	3.80	3.14	4.46	3.96	3.64	4.28
I would fit in well socially with others at university.	3.90	3.37	4.43	3.67	3.29	4.05
WA Team Knowledge and Confidence Scale						
I am confident about how to manage money and finances as a participant.	3.50	2.73	4.27	3.67	3.30	4.03
I know what support is available at university.	4.10	3.47	4.73	3.81	3.48	4.14
I know how to access support available at university.	3.90	3.04	4.76	3.63	3.30	3.96
I have the skills and abilities to navigate participant life whilst studying.	3.70	2.87	4.53	3.89	3.64	4.14

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Difference-in-Difference Analysis

Method

Initially, we attempted to conduct Propensity Score Matching (PSM) to account for selection bias as IG and CG were self-selected. Using logistic regression models, we explored several PSM approaches with the treatment variable being attendance at the intervention. Covariates tested included IMD quintile, parental higher education background, LPN/non-LPN (as outlined in Table 2) and two academic self-efficacy confidence scores which showed significant difference between IG and CG at the pre-intervention stage (Q1 confidence getting grades required to progress to university and Q3 confidence managing university-level study). Several models were tested including nearest neighbour matching with and without replacement, and were tested against different calliper widths (0.1 x standard deviation, 0.2 x standard deviation and 0.25 x standard deviation of the logit of the propensity score). Covariate balance was assessed post-matching using standardised mean differences (SMD) but remained unsatisfactory (SMD > 0.2 after matching) for all models tested, even with adjustments like changing calliper size or matching with replacement. As a result, we felt PSM was not appropriate for this dataset.

To instead estimate the causal effect of the Summer School, we used a difference-in-difference (DID) approach, comparing average pre- and post-intervention changes in survey scores between IG and CG. Participants were not matched, and demographic differences were not adjustment for due to the challenges outlined above and small sample sizes. Follow-up survey results were excluded for the same reasons. The method compared changes in average pre and post survey scores. Two types of models were used:

1. Aggregated scores (mean score of all items within each of the three scales) were analysed in R using linear regression. These tests were illustrative to understand general trends and are not reported on below.
2. Individual Likert-scale items were analysed in R using ordinal logistic regression.

DID assumes that, in the absence of the intervention, outcomes for the treatment and control groups would have followed parallel trends. The parallel trends assumption was checked visually by comparing baseline means and pre/post trajectories, and sense-checked using simple linear regression on mean scores. As we only had two time points, we could not test trends statistically; therefore, we assume parallel trends are plausible for survey items that met our visual and regression checks.

Key Findings

Three survey items showed plausible parallel trends, and of those, two showed statistically significant treatment effects for the interaction of Time (pre/post) x Treatment (IG/CG). One item was close to statistical significance but did not reach the 0.05 alpha level.

The two questions that showed a statistically significant treatment effect were “I know what support is available at university” (Q8) and I know how to access support available at university” (Q9). Q8 showed a positive interaction coefficient (β = 2.41, *95% CI* [1.09, 3.78], p <0.001) with an odds ratio of 11.13 (*95% CI* [2.96, 43.9]) (Table 9). This indicates that IG participants were over 11 times higher odds of reporting higher agreement post intervention compared to CG, reflecting a very large effect size.

For Q9, the interaction coefficient was also positive and significant (β = 1.56, *95% CI* [0.28, 2.86], p = 0.002) with an odds ratio of 4.76 (*95% CI* [1.32, 17.53]) (Table 9). This suggests

that IG participants had nearly five times higher odds of reporting a higher level of agreement post-intervention than CG.

Figure 1 illustrates these relationships by showing the predicted probability of selecting "Strongly Agree" across time points and groups. For both Q8 and Q9, a marked increase in this probability is observed for IG compared to CG, visually reinforcing the size and direction of the treatment effect.

These results suggest a **potential causal effect of the Summer School, particularly in improving participants' knowledge of support and seeking support**. However, the low sample size constrains generalisability, and we are unable to assess whether the effect is sustained over the medium or long term as follow-up survey results had to be excluded from this analysis. Furthermore, these results showed relatively large confidence intervals, suggesting that the true magnitude of the effect could range from a modest increase (around 1.5-2 times higher post-initiative) to very large (up to 43 times higher agreement post-initiative).

Q5 "I would fit in well academically with others at university" showed a relatively large positive treatment effect but was not statistically significant (*β* = 1.33, *95% CI* [-0.08, 2.76], *p* = 0.065, OR = 3.79 (*95% CI* [0.93, 15.87]) (Table 9). The result was close to statistical significance with a relatively large effect size and has been included in this report as an item of interest. This item would merit further testing with a larger sample size. However, no causal inference can be drawn for perceived academic fit based on the current analysis.

Table 9

*Summary of difference-in-difference analysis including the interaction coefficient with 95% confidence intervals shown (β [LL, UL]), standard error (SE), significance (p) and odds ratio with 95% confidence intervals (OR [LL, UL]). **

Question	β [LL, UL]	SE	*p*	OR [LL, UL]
Q5 - I would fit in well academically with others at university.	1.33 [-0.08, 2.76]	0.72	0.065**	3.79 [0.93, 15.87]
Q8 - I know what support is available at university.	2.41 [1.09, 3.78]	0.69	<0.001	11.13 [2.96, 43.9]
Q9 - I know how to access support available at university.	1.56 [0.28, 2.86]	0.66	0.002	4.76 [1.32, 17.53]

* β refers to the interaction effect (log-odds scale). Odds ratio is the exponentiated β and reflects the magnitude of the effect.
** Q5 is not significant to the 0.05 alpha level but is close to significance and included here as a survey item of interest.

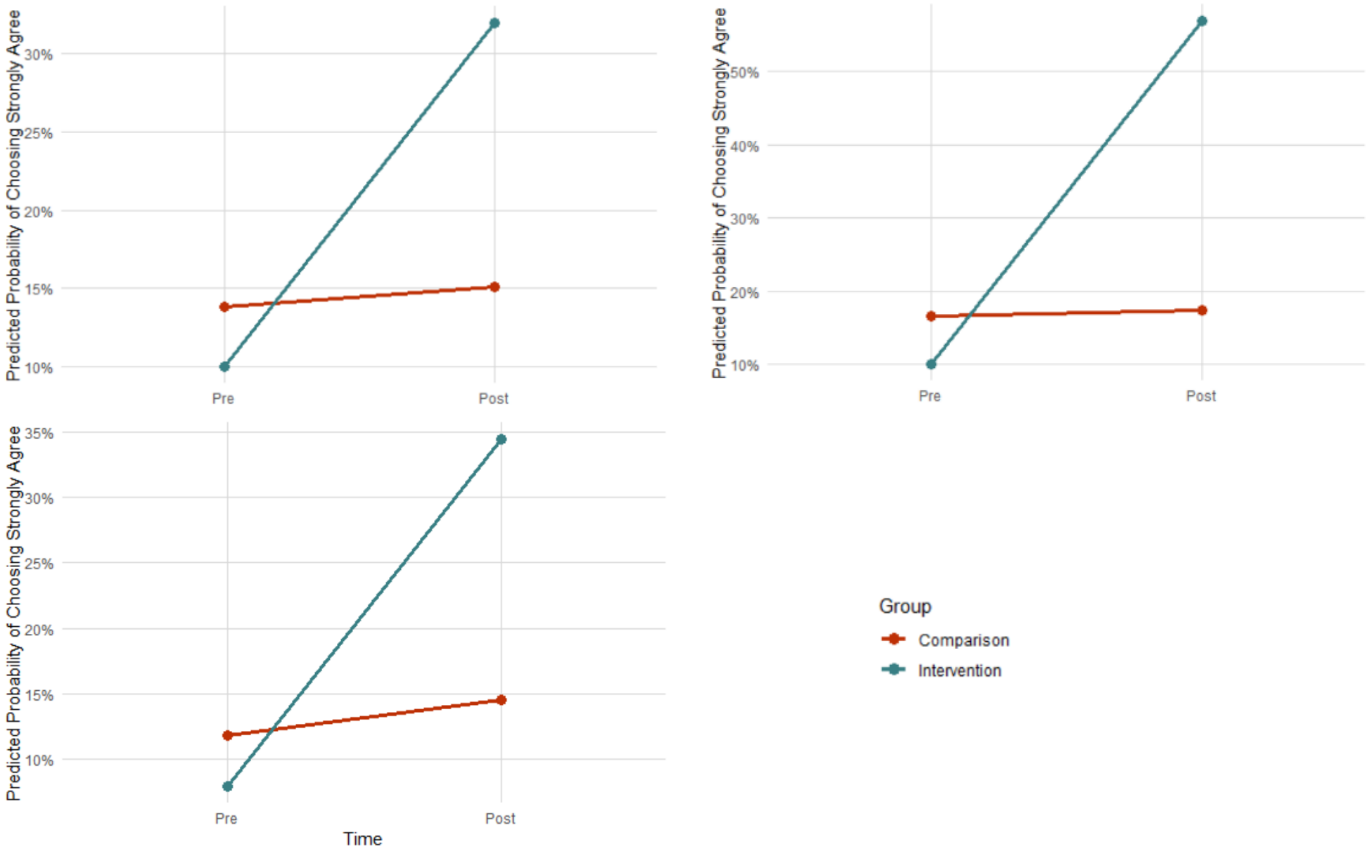

Figure 1

Predicted probability of scoring the top score '5' (Strongly Agree) by time (pre and post) and treatment group (intervention or comparison group). Charts are shown for Q5 – I would fit in well academically with others at university (top left), Q8 – I know what support is available at university (top right) and Q9 – I know how to access support available at university (bottom left). Note: Q5 did not have a statistically significant treatment effect but was close to statistical significance at the 0.05 alpha level.

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Focus Group Findings

Two focus groups were run in November 2024, one for the intervention group (IG) and one for the comparison group (CG). However, there were only two attendees at each of these focus groups, severely limiting the conclusions arising from this focus group. Thematic analysis was conducted in NVivo. Themes discussed below should therefore be interpreted as indicative rather than representative.

There were three themes arising from the thematic analysis of focus group transcripts. These are summarised in Figure 2 and are discussed in detail below.

Figure 2

Theme map of thematic analysis of focus groups, summarising the three main themes arising from the analysis.

Theme 1: Fitting In at University

Fitting in was primarily seen as relating to social relationships and mediated by things like chosen course. One comparison group participant "found it really easy to make friends on my course" as being on a creative course makes it "easier to find people you get on with". Both intervention group participants "would say I fit in" due to the professional nature of their chosen courses in healthcare:

> we're all kind of here for the same thing. We all want to be [healthcare professionals]. It's quite nice, it's a degree that leads to a career so we're all looking for the same things, we've all got kind of the same values, the same kind of personalities.

Campus affected belonging also. One comparison group participant struggled to make social connections, partly due to "[becoming] really reserved and I just stay at home" and partly because "I'm on [satellite campus] I haven't been able to make as many friends outside of

my course." The intervention group also discussed how studying on a satellite campus and a course with high contact hours impacted their ability to join societies and interact in events as "The trouble is I have to travel down here to [main campus] to do them. There's none up at [satellite campus]". This suggests that course, campus and individual confidence all influence the experience of fitting in for this small sample.

The Summer School "has helped me to know kind of where I fit in". Making social connections felt easier for both IG participants:

> [The Summer School] definitely impacted me positively. Like it kind of set me up to come to uni and it gave me the chance to get rid of some of my nerves being here, socialising with people that are kind of quite like-minded to me.

Both discussed how the Summer School increased their confidence meeting new people and now "Lots of my friends are from the summer school and I've made new friends from their friends". This could suggest that the Summer School has a positive impact on confidence making social connections, building a foundation for creating a sense of belonging, aligning with improvements observed in survey findings.

Theme 2: Finances

CG participants overall had slightly more positive experiences managing finances than IG. For both CG participants "it was definitely an adjustment and difficult at first – just learning how to budget" but both were able to maintain good habits and were aware of university resources to support students with budgeting and financial planning.

IG participants expressed more stress and concern around budgeting, with one stating "I'm surviving but just surviving". The cost of food on campus was noted as an issue, as well as the distance of grocery stores from campus which are too far away to travel to during a day that comprises 9-5 classes with a short lunch break:

> I've got like [several grocery stores] like 15/20 minute walk up the road so it's closer for me to do like my weekly food shop but not too close for me to be always up there buying food.

Both IG participants study on courses that require placement, and "come January when I've hit placement that's when a load of us are gonna then start to really struggle". Applying for jobs was seen as difficult and "I've applied for quite a few jobs and been turned away" as employers did not want to employ someone who would be away for eight weeks on placement in the middle of a contract. However, both attendees expressed confidence in seeking support from staff, including tutors and finance officers. Incorporating more budgeting activities that account for student finance payment timelines and having a take-home budgeting resource were suggested as useful additions for the Summer School.

The experiences of all participants vary considerably by individual circumstance. However, there is general awareness of university support among all and confidence to approach staff for support. We cannot conclude whether IG participants' confidence to seek support is directly a result of Summer School attendance, however, their confidence aligns with survey findings

Theme 3: Academic-Related Experiences and Studies

Both groups discussed the increase in difficulty of university work "the jump between A Levels and uni [is big and] they definitely expect you to kind of just know a lot of things". Participants across both groups had similar experiences including struggling with "content-heavy" coursework and assessments but looking forward to more practical aspects of their course. This suggests there is not a large difference between IG and CG participants' academic experiences post-entry.

None of the participants were aware of contextual offers, nor that they were contextual offer holders. IG participants confused contextual offers with clearing and both groups knowledge on the topic centred on offers being "dependent on your grades". As UWE does not require a separate application for contextual offers, many offer holders are unaware that they have received one nor are they often aware that the support they are offered in Access to UWE is bespoke for contextual offer holders. This appears to be reflected in the responses of all participants.

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Academic Outcomes: Enrolment, Continuation, and Attainment

Method

The purpose of this analysis was to establish the impact of Summer School attendance on key academic outcomes. These were:

- Enrolment at UWE: how many participants accepted their offer and enrolled at UWE. Measured as ISIS2 RASP Enrolment Status.
- Continuation: how many participants were fully registered at UWE 15 days after their start date at UWE and were still enrolled one year on.
- Academic attainment: how many participants had good academic outcomes following their first year at UWE. Measured as weighted average mark (this does not include data from modules that are pass/fail only) and pass rate (includes all modules a student completed including modules that have no mark, only pass/fail). Both of these measures take resit marks as final.

We ran tests focused on the following evaluation questions:

1. To what extent did attendance at the Summer School increase the likelihood of enrolling at UWE?
   Tests used:
   - Fisher's exact test to measure significance of association between IG and CG enrolment.
   - Frequentist logistic regression to understand relationship between enrolment and group, controlling for a range of different variables.
   - Bayesian logistic regression to confirm findings from frequentist logistic regression.
2. What key differences were observed between Summer School attendees and non-attendees' academic outcomes (continuation into second year and academic attainment)?
   Tests used:
   - Descriptive statistics to measure differences between IG and CG

- Statistical tests to measure for significant differences between IG and CG academic attainment measures (t-test and Mann Whitney U)

Our reasons for choosing these methods are as follows:

- Descriptive statistics showing number and proportion of participants from each group (IG or CG) measured against each outcome. These findings tend to be useful illustrations of key figures and are reported as standard.
- T-tests and Mann Whitney U tests were used to measure significant differences between IG and CG for academic attainment outcomes. Weighted average mark data was normally distributed following a Shapiro Wilks test and used a t-test; pass rate was not normally distributed following a Shapiro Wilks test and so Mann Whitney U was used to measure the level of significant difference between the groups.
- Fisher's exact test was used to look for significant associations between group (IG or CG) and enrolment and continuation. Fisher's exact test was chosen due to its ability to work with not normally distributed categorical variables.
- Frequentist logistic regression was used to further develop findings following Fisher's exact test for enrolment and understand the relationships between group membership and enrolment. We also used this method to understand how additional factors such as demographic characteristics and pre survey measure of academic self-efficacy affected enrolment based on group membership.
- Bayesian logistic regression was used to solidify findings observed during our frequentist logistic regression. Bayesian methods were used due to their ability to better handle small sample sizes compared to frequentist and are reported below for transparency. Bayesian logistic models used a logit link and weakly informative priors. We report 95% credible intervals.

Key Findings

Evaluation question 1: To what extent did attendance at the Summer School increase the likelihood of attending university?

Analysis of descriptive statistics showed that a larger proportion of IG enrolled at UWE (86.4%) compared to CG (60%).

Table 10.

Descriptive statistics relating to intervention group (IG) and comparison group (CG) enrolment.

Enrolment status	IG		CG	
	n	*%*	*n*	*%*
Enrolled	19	86.4	30	60.0
Did not enrol	2	9.1	20	40.0
Withdrawn	1	4.5	0	0

Statistical tests suggested that IG were approximately 6 times more likely to enrol at UWE than CG with a statistically significant result (OR: 6.20, $p = 0.012$, Fisher's exact test). However, the confidence intervals for these odds are very wide (*95% CI* [1.26-60.76]), likely due to the small sample size in IG. This means that while the association is statistically significant, the true magnitude of this effect could range from moderately higher likelihood to very large higher likelihood for IG to enrol at UWE compared to CG.

We also modelled the outcome of enrolling at UWE, controlling for study group and other predictors using both frequentist and Bayesian logistic regression.

A simple logistic regression model for the relationship between enrolment and group (IG or CG), showed higher likelihood for IG to enrol compared to CG across both frequentist and Bayesian methods. Frequentist logistic regression suggested that IG has around 6 times higher odds of enrolment compared to CG with statistical significance, and Bayesian methods suggested this odds ratio is around 8 with high posterior probability (Table 11). **This suggests that IG are much more likely than CG to enrol**, although these results are based on model assumptions, and are limited by small sample size, large confidence intervals for frequentist methods, large credible intervals for Bayesian methods, and simple models that do not account for potential confounders.

Table 11.

Summary of frequentist and Bayesian logistic regression modelling enrolment ~ study group (IG or CG).

Method	Odds Ratio	Uncertainty	Simple Summary
Frequentist	OR = 6.33 (95% CI: 1.33, 30.23) (p = 0.0206)	N/A	IG had about 6.3× higher odds of enrolling than CG although the true effect is likely between 1.3-30.2 times higher odds. This result is statistically significant i.e. not due to random chance.
Bayesian	Mean OR = 8.29 (95% CrI: 1.53, 30.28)	Posterior probability of positive effect: 99.7%	Given the data and assumptions, IG is very likely to enrol more than CG (99.7% probability) with substantially higher odds of enrolment than CG (8.3x higher average odds, but likely ranging from 1.53- 30.3

We tried fitting more complex models including ones that controlled for demographic characteristics, as well as pre survey scores, particularly Q1 and Q3, which show significant difference between groups at baseline (see Table 5a above). Majority of these models either dropped too many cases, reducing sample size substantially, or added unnecessary complexity (higher AIC than simple models). However, controlling for Q1 showed interesting results. Q1 directly asked participants about their confidence achieving the grades required to progress to university, which may directly affect enrolment. Furthermore, IG scored significantly higher than CG on this question at baseline, suggesting confidence in this area may be acting as a potential confounder. When controlling for Q1 pre survey results, we found that IG still had higher odds of enrolling that CG with both frequentist and Bayesian approaches (Table 12). This suggests that IG are still more likely to enrol at UWE even when Q1 results are held constant. However, these results are based on model assumptions, and are limited by small sample size, large confidence/credible intervals, and a model that may not have accounted for key confounders outside of the single one tested.

Table 12.

Summary of frequentist and Bayesian logistic regression modelling enrolment ~ study group, adjusting for differences at baseline in pre survey question 1 responses "I am confident that I can get the exam results required to progress to university".

Method	Odd Ratio	Uncertainty	Simple Summary
Frequentist	OR = 5.16 (95% CI [1.05, 25.4], (p = 0.0434)	N/A	IG had about 5.2× higher odds of enrolling than CG although the true effect is likely between 1.1 and 25.4 times higher odds; result is statistically significant i.e. not due to random chance.
Bayesian	Mean OR = 7.46 (95% CrI: 1.33, 29.59)	Posterior probability of positive effect: 99.1%	Given the data and assumptions, IG is very likely to enrol more than CG (99.1% probability) with substantially higher odds of enrolment (7.5x higher odds on average, but likely ranging from 1.3–29.6.

Despite limitations outlined above, all these tests suggest that attendance at the Summer School is associated with higher enrolment, a trend that merits further testing to understand if this effect can be observed with a different sample.

Evaluation question 2: What key differences were observed between Summer School attendees and non-attendees' academic outcomes (continuation into second year and academic attainment)?

Analysis of descriptive statistics showed that IG had a higher continuation rate (100%) than CG (86.7%), although this was not a statistically significant difference (p = 0.267, Fisher's exact test). This means that we cannot rule out random chance inflating the continuation rate for IG and we cannot make strong conclusions about the impact of the Summer School on continuation.

Table 13.

Descriptive statistics relating to intervention group (IG) and comparison group (CG) continuation.

Continuation status	IG		CG	
	n	*%*	*n*	*%*
Continued	19	100%	26	86.7
Did not continue	0	0	3	10.0
Graduated	0	0	1	3.3

Academic achievement (average marks and pass rates) was computed for both groups. IG had slightly higher pass rates but a slightly lower average marks than CG (Figure 3, Table 14). On average IG participants passed 84.5% of their modules with mean weighted average marks of 57.0%, compared to 82.7% average pass rate and 60.6% mean weighted average marks for CG. However, statistical tests showed that there was no statistically significant difference between IG and CG for mean average mark (t = 0.593, p = 0.556, T-test) nor mean pass rate (W = 264, p = 0.644, Mann Whitney U). We therefore cannot conclude that the Summer School had any impact on academic achievement at the end of participants first year at UWE.

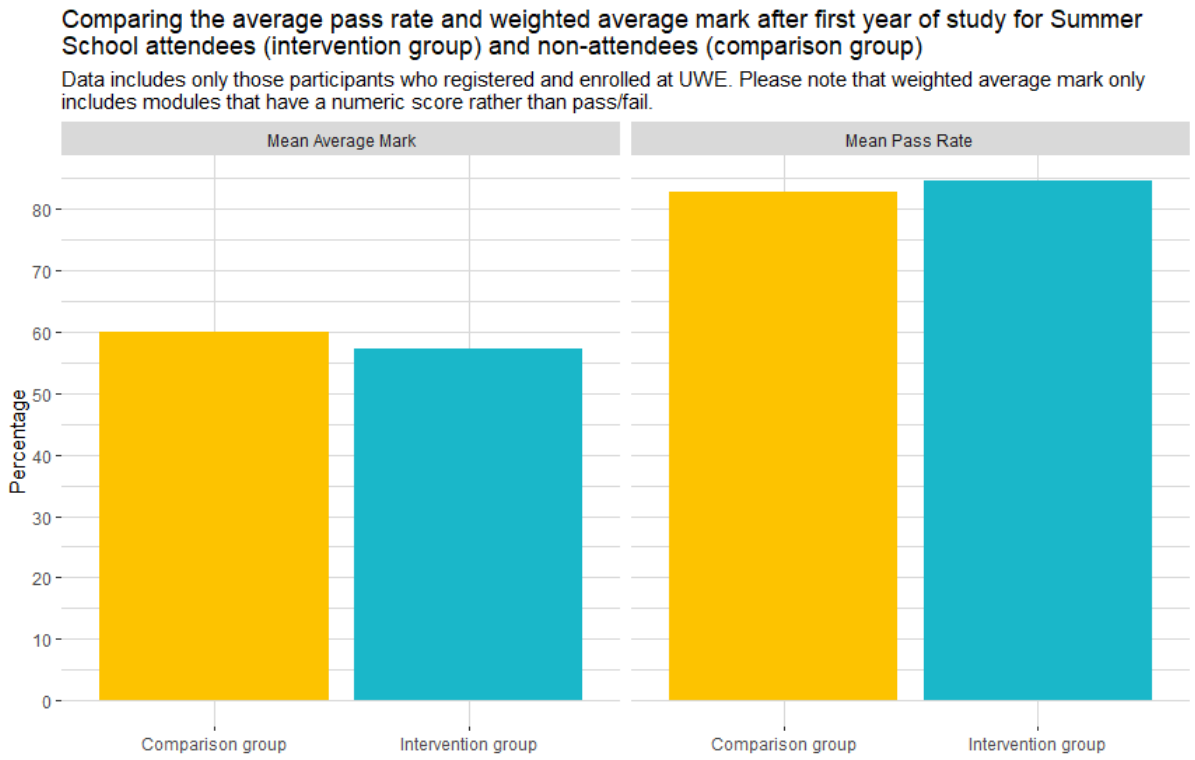

Figure 3. Chart depicting average pass rate and average mark in percentages for IG and CG.

Table 14.

Mean average mark and mean pass rate for IG and CG at the end of their first year of study at UWE.

Metric	IG	CG
Mean average mark	57.0 (SD = 14.9)	60.6 (SD = 17.1)
Mean average pass rate	84.5 (SD = 24.8)	82.7 (SD = 21.4)

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