National Student Survey

Grade inflation analysis

Contents

Introduction

1. This report explains the data analysis conducted by the Office for Students (OfS) to explore whether the National Student Survey (NSS) has driven grade inflation. It is part of the wider review of the NSS that took place in 2020.

2. Further information is available from Jack Preston (Jack.Preston@officeforstudents.org.uk) and Anna Sherratt (Anna.Sherratt@officeforstudents.org.uk).

Background and scope

3. As part of the wider review of the NSS requested by the Department for Education (DfE), the Office for Students (OfS) was asked to ensure that the NSS "does not drive the lowering of standards or grade inflation".[1] As a result, the terms of reference of our review stated that we would explore "whether the NSS drives the lowering of academic standards and grade inflation". This report covers the analysis undertaken by the OfS to investigate the extent to which the NSS is linked with the lowering of standards and grade inflation. As the analysis was conducted in response to concerns raised by DfE, this report only concerns providers in England.

4. We began this work by acknowledging that it is not usually possible to prove causal hypotheses using data alone. The data will show us whether two phenomena are correlated, but it is a further judgment whether one causes the other. Data can be used, however, to rule out causal hypotheses. For example, if event B often occurs in the absence of event A, we cannot claim that A is the sole cause of B. Our approach, therefore, has been to explore whether the data we hold is consistent with the claim that the NSS causes grade inflation.

5. Causation requires a mechanism – if the NSS causes grade inflation, there must be a route through which it achieves this. The mechanism is not obvious. Almost all students participate in the NSS before they receive their degree classifications, so receiving a good degree cannot **directly** cause a student to respond positively to the NSS. Neither does it seem likely that responding positively to the NSS causes a student to get a good degree. We have seen no evidence that academics are willing to offer higher grades in return for positive feedback. But even if they were, it would not be possible: the survey process is designed so that providers cannot identify how individual students have responded.

6. Nonetheless, there may be an indirect mechanism that allows the NSS to cause grade inflation. For example, it may be the case that pressure to improve NSS results causes academics to make their courses easier, or to award higher marks. This in turn leads to more satisfied students and better NSS results; and it also leads to more first class degrees. Our aim, then, is to assess whether the data is consistent with this, or a similar, hypothesis of indirect causation.

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[1] See https://www.gov.uk/government/publications/reducing-bureaucratic-burdens-higher-education/reducing-bureaucratic-burdens-on-research-innovation-and-higher-education.

Summary of findings

7. Increases in grade inflation occurred some years after the NSS was introduced, suggesting the NSS is not the sole cause of grade inflation.

8. Over time, reported intellectual stimulation has remained stable. This counts against the hypothesis that academics have made their courses easier in order to gain better NSS scores.

9. There is a correlation between degree classification and overall satisfaction in the NSS: students with higher degree classifications tend to report higher rates of overall satisfaction, even when other factors are taken into account. We do not know what causes this relationship. It may be the case that expectation of a good degree causes students to respond positively to the NSS. But it is equally consistent with the data that a third factor, such as engagement with the course, is the common cause of both observed phenomena.

10. There is no correlation between grade inflation and changes in overall satisfaction within providers. Awarding more firsts does not alone lead to an improvement in NSS results.

11. In summary, the data does not provide evidence that the NSS causes grade inflation. We have not found definitive evidence to the contrary – but our analysis suggests that if there is a causal relationship between the two, it is complex and there are other factors involved.

Findings in detail

Grade inflation and NSS results over time

12. We examined NSS responses and grade inflation over time, to see if the data was consistent with the hypothesis that the introduction of the NSS caused providers to award more first class degrees. The assumption here is that if the NSS alone causes grade inflation, then we would expect grade inflation to be negligible before the survey started, and then to accelerate shortly after the introduction of the NSS.

13. We focused on reported overall satisfaction[2] in the NSS due to the attention it receives and the fact that we know from previous analysis that responses to Question 27 are highly correlated with responses to other NSS questions.[3] We also considered reported stimulation[4] over the same period, as a way of testing the hypothesis that courses became easier following the introduction of the NSS.

14. The metric we considered was the agreement rate, which is the percentage of students who responded that they either definitely agreed or mostly agreed with an NSS statement.

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[2] 'Overall satisfaction' refers to the agreement rate for Question 27 of the current NSS questionnaire: Overall, I am satisfied with the quality of the course.'

[3] 'UK review of the provision of information about higher education: National Student Survey results and trends analysis 2005-2013', available at https://webarchive.nationalarchives.gov.uk/20150106143641/ https://www.hefce.ac.uk/pubs/year/2014/201413/#d.en.87641.

[4] 'Intellectual stimulation' refers to the agreement rate for Question 3 of the current NSS questionnaire: 'The course is intellectually stimulating'. This was Question 4 in the pre-2017 questionnaire.

15. **Figure 1: Time series of overall satisfaction, intellectual stimulation and the proportion of firsts awarded** shows a sector-level plot of the proportion of firsts awarded[5] along with the agreement rates for overall satisfaction and intellectual stimulation.[6] The proportion of firsts is shown from the 2000-01 to 2018-19 academic years inclusive. NSS responses are shown from 2004-05, as 2005 was the first year that the NSS was run.

Figure 1: Time series of overall satisfaction, intellectual stimulation and the proportion of firsts awarded
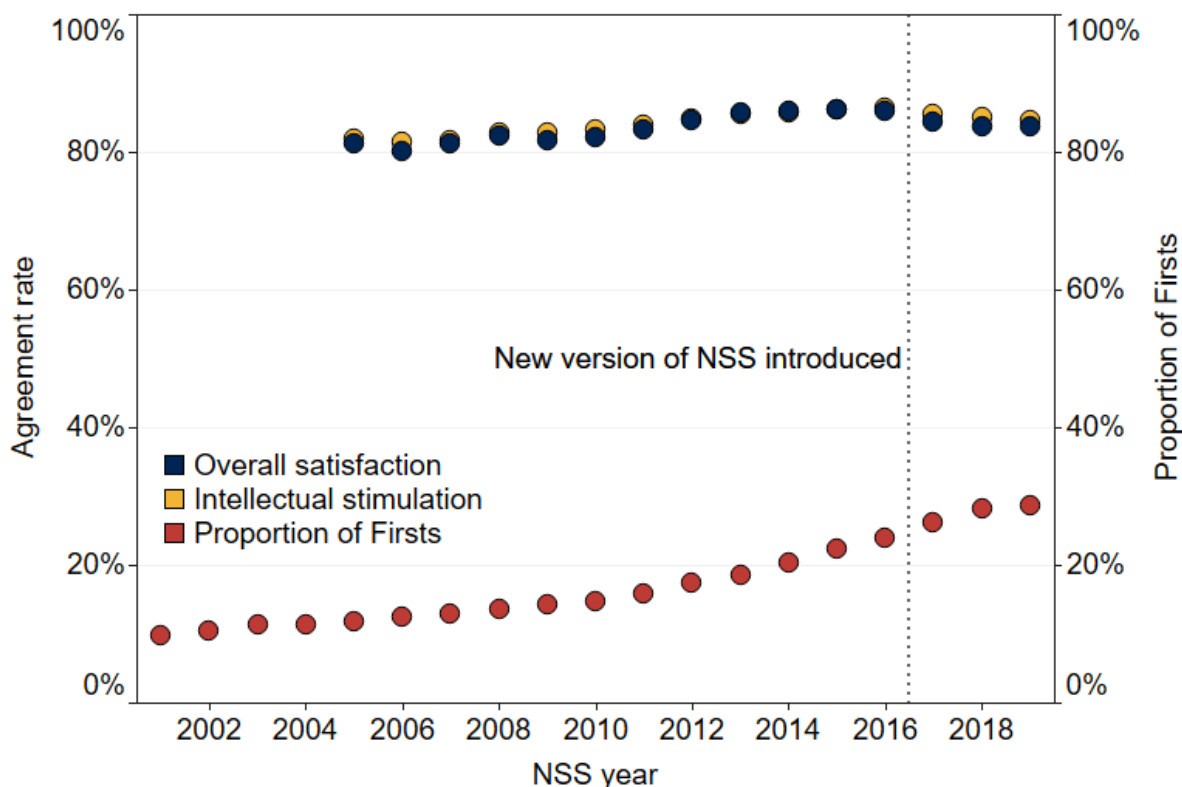
16. The proportion of firsts awarded shows a year-on-year increase prior to the introduction of the NSS, from 2000-01 to 2004-05: grade inflation predates the NSS. The rate of grade inflation was unaffected by the introduction of the NSS, showing no clear change in the size of year-on-year increases in the years following the introduction of the NSS. Viewing the trend of the proportion of firsts in isolation, 2010-11 presents a more obvious change point, showing an increase in the rate of grade inflation that is clearly visible by eye. This higher rate of increase is largely maintained in subsequent years.[7]

17. The agreement rates for overall satisfaction and intellectual stimulation remain relatively stable over the period shown: year-on-year changes remain small throughout. Some increase is seen from the start of the time series, reaching a plateau of around 86 per cent between 2012-2016, before decreasing slightly in the years that follow. The questions included in the NSS changed

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[5] The proportion of firsts is shown for UK-domiciled, first-degree students, registered at providers in England, who received classified degrees. The proportion of firsts is calculated from HESA student data only.

[6] Overall satisfaction and intellectual stimulation are calculated for students reported in the HESA Student record only, registered at providers in England. Alternative providers and further education colleges are excluded to make the population comparable between years; colleges were first included in the 2008 survey, and most alternative providers did not participate in the survey until 2016.

[7] The causes of changes about this point in time are beyond the scope of this analysis and are highlighted only as a comparison to 2004-05.

from the 2017 survey onwards, which may explain some of the change between 2015-16 and 2016-17.

Conclusions

18. Grade inflation existed prior to the NSS, and the sharp increase in grade inflation took place five to six years after the first year of the NSS. This does not sit easily with the hypothesis that the introduction of the NSS (alone) caused grade inflation.

19. It is possible that the acceleration in grade inflation was a delayed effect of the introduction of the NSS. In other words, it may have taken academics and university managers around five years to respond to the survey by increasing the proportion of first class degrees they reported. It does not seem likely that the sector would be this slow to react, particularly given that the survey received interest and attention from its inception. It is also possible that the introduction of the NSS did not cause the accelerated grade inflation, but that subsequent changes to it did. We considered the changes that have been made to the survey since its inception. These include the incremental widening of the coverage between 2008 and 2018 to include further education colleges and alternative providers; and the introduction of new survey questions. We do not think that any of these changes are significant enough to turn the NSS into a cause of grade inflation.

20. When we discussed Figure 1 with colleagues (internal and external to the Office for Students) as part of the review, they often reflected that the acceleration in grade inflation took place around the time that the fee limits were increased. The White Paper 'Higher Education: Students at the Heart of the System' was published in June 2011, with the policy aim of increasing competition in higher education. Higher fees were charged for the first time in 2012-13. It is possible that this is a missing element in the time series: perhaps an increased emphasis on competition and the market led to accelerated grade inflation, either alone or in combination with the NSS. Again, the causal mechanisms that link competition, fees and grades need some unpicking, but this alternative theory is a better fit with the time series data in Figure 1.

21. Figure 1 also shows that students do not report declining levels of intellectual stimulation. This is a small piece of evidence against the hypothesis that academics have made courses easier to secure better NSS results. We considered whether we could carry out similar analysis using NSS Question 4: "My course has challenged me to achieve my best work". However, this question was introduced in 2017, meaning that we have no records of students' perceptions of challenge covering the key period of interest.

Relationship between degree classification and NSS results

22. We investigated the relation between degree classification and NSS results at an individual student level: are students with better degree classifications more likely to respond positively to the NSS? We also considered the relation between degree classification and reported intellectual stimulation. In both cases, we were also interested to see whether the relationship had changed over time.

23. **Figure 2: Time series of overall satisfaction by degree classification.** shows a time series of overall satisfaction split by degree classification, over the period 2011-12 to 2018-19.[8] This shows that students who receive first class honours tend to have higher rates of overall satisfaction than students who receive upper second class, who in turn have higher rates than students receiving other honours. The overall satisfaction rates for each degree class rise and fall slightly over time, but the difference between them remains stable.

Figure 2: Time series of overall satisfaction by degree classification.[9]
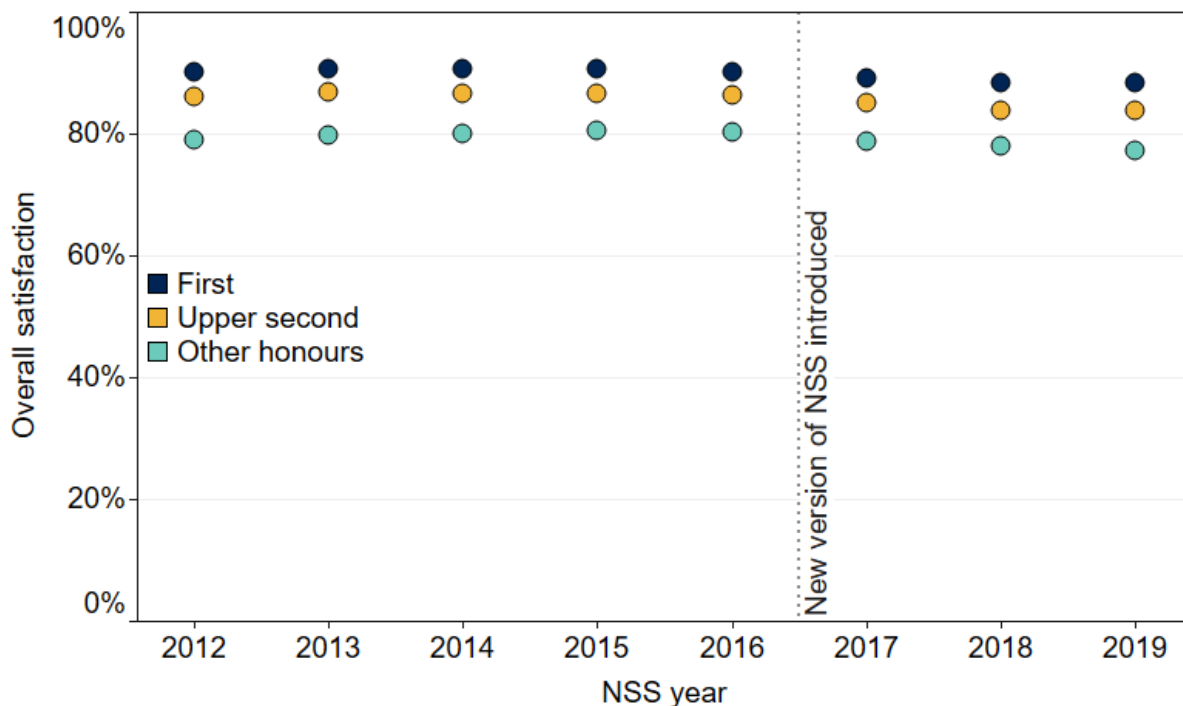
24. Intellectual stimulation follows the same pattern; this is shown in **Figure 2: Time series of intellectual stimulation by degree classification**. Students who receive higher classifications report feeling more intellectually stimulated than students who receive lower classifications, which is seen consistently over time.

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[8] The choice of a shorter period for this figure was solely pragmatic and due to the availability of data sources that linked NSS results and degree outcomes.

[9] The reference line indicates where the new version of the NSS was introduced in 2017.

Figure 2: Time series of intellectual stimulation by degree classification
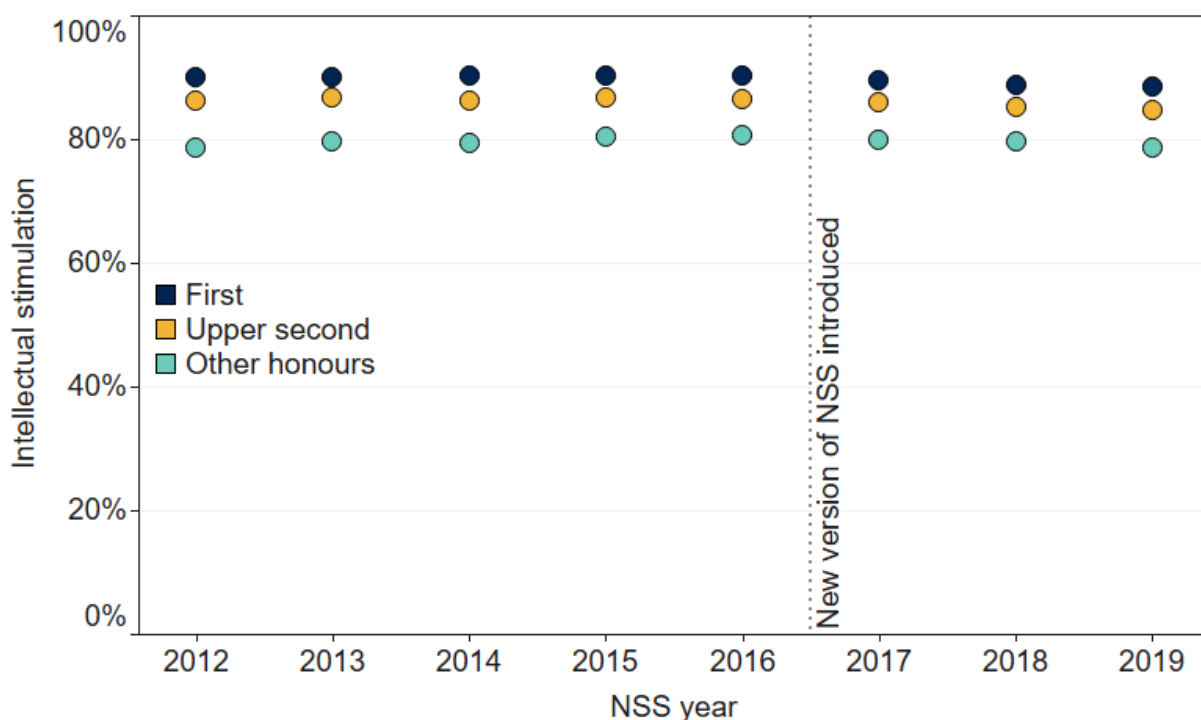
25. We carried out statistical modelling to see if the relationship between degree classification and overall satisfaction could be explained by other factors. We considered degree classification, subject of study, age, entry qualifications, disability status, sex, ethnicity, country of domicile within the UK, provider, and method of response to the NSS in our model. This showed that there remains a significant difference in satisfaction across degree classifications even when these factors are taken into account. Detailed discussion of the methods and findings of the statistical modelling are contained in Annex A: Statistical modelling methodology.

Conclusions

26. Students who received first class degrees are more likely to respond positively to the NSS, even when other factors – such as entry qualifications and subject of study – are taken into account. This is not an interesting result: nobody should be surprised that students who are doing well report a more positive experience. This finding is consistent with the hypothesis that the NSS causes grade inflation. Perhaps, in pursuit of better NSS scores, academics have effectively 'spoon-fed' these students, causing them to do better and to be more satisfied. But it is also consistent with other causal hypotheses: maybe students who are more engaged with their course tend to do better and to get better grades.

27. The relationship between overall satisfaction and degree classification has remained stable over time. If the relationship is taken as evidence that the NSS causes grade inflation, then the problem is not getting worse over time.

28. The positive relation between degree classification and reported intellectual stimulation suggests that, at least from the student's point of view, better degrees are not achieved by 'spoon-feeding' or making courses easier.

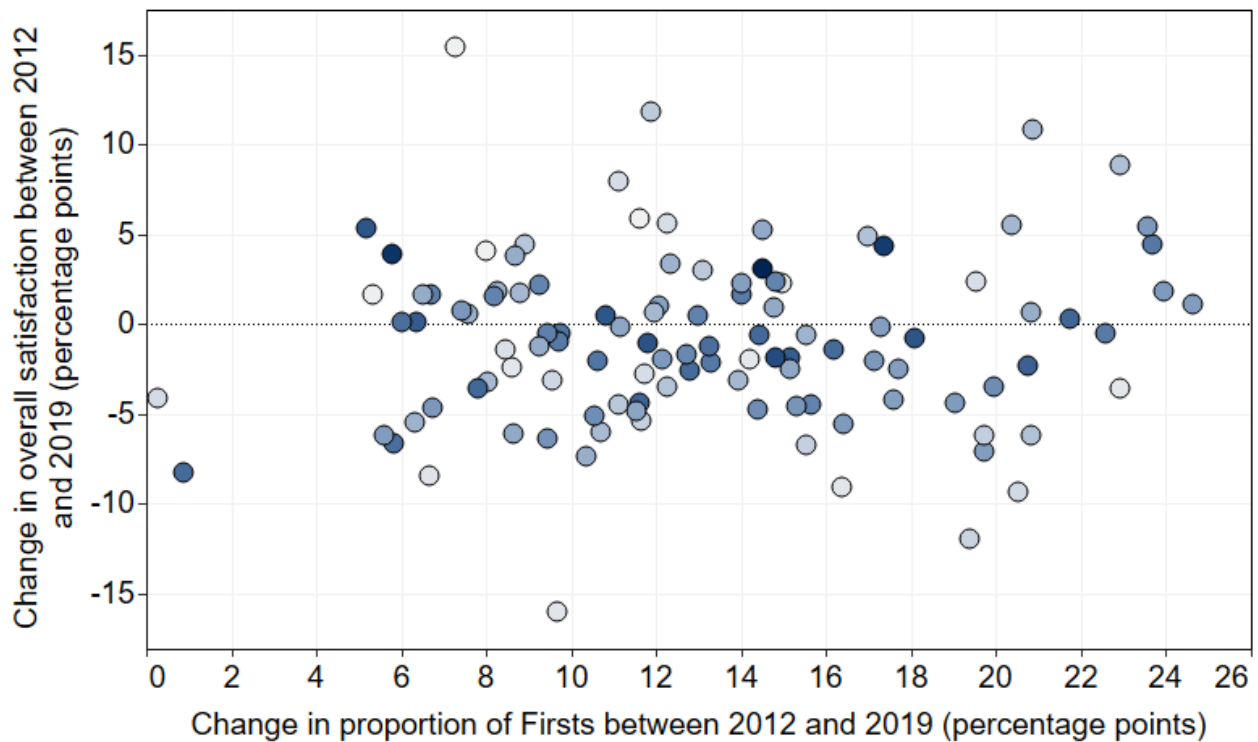## Correlation between grade inflation and changes in NSS results

29. We examined the relation between increases in overall satisfaction and grade inflation at a provider level. We were interested to see whether providers with the greatest increases in first class degrees had also seen the greatest increases in satisfaction. This would be consistent with the hypothesis that the NSS causes grade inflation (or, more precisely, that both grade inflation and better NSS scores are caused by an attempt to make courses easier and more agreeable to students, which is in turn caused by the existence of the NSS).

30. We examined the correlation between changes in the proportion of firsts and changes in overall satisfaction at provider level over the period 2012-2019. The results of this are shown in **Figure 4: Change in proportion of first class degrees and change in overall satisfaction between 2012 and 2019**.[10] The colour of the dots is proportional to the number of responses to Question 27 received by the provider in NSS 2019; darker dots represent providers with more responses.

31. Grade inflation was observed across almost all providers. However, while large increases in the proportion of firsts were accompanied by increases in overall satisfaction for some providers, the opposite is the case for others. Looking at the right-hand side of the chart, we can see that providers with the greatest grade inflation experienced both big increases and big decreases in overall satisfaction. Similarly, on the left-hand side of the chart, providers with relatively low grade inflation also experienced dips and rises in their NSS results. Statistical techniques confirm what can be seen by eye: there is no significant correlation between change in proportion of firsts and change in overall satisfaction between 2012-2019.[11] We can see from the colour of the dots that this is the case for providers of all sizes.

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[10] Only providers with at least 100 responses and at least 10 first class degrees in both 2012 and 2019 are shown. We chose to do this to reduce the chance of seeing very large changes that are not significant. For example, we are much more likely to observe an increase in satisfaction of 10 percentage points at a provider with 10 responses than at a provider with 500 responses.

[11] The Pearson correlation coefficient is 0.03 with a p-value of 0.77.

Figure 4: Change in proportion of first class degrees and change in overall satisfaction between 2012 and 2019[12]

32. We also looked at the correlation between changes in the proportion of firsts and changes in intellectual stimulation. The results of this are shown in **Figure 5: Change in proportion of first class degrees and change in intellectual stimulation between 2012 and 2019**: while this displays a very weak positive relationship, this relationship is not significant.[13] This means that it is most likely that there is no correlation between these two variables, but that there is a small chance that a very weak positive correlation exists. Neither of these outcomes support the hypothesis that the NSS has led to lowering of standards. If it had, we might expect to see a negative relationship, as providers whose courses had become less demanding saw an increase in the proportion of firsts awarded, but a decrease in reported intellectual stimulation.

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[12] Each dot represents one provider. The colour of each dot is proportional to the number of NSS responses received by the provider in 2019.

[13] The Pearson correlation coefficient is 0.13 with a p-value of 0.15.

Figure 5: Change in proportion of first class degrees and change in intellectual stimulation between 2012 and 2019[14]
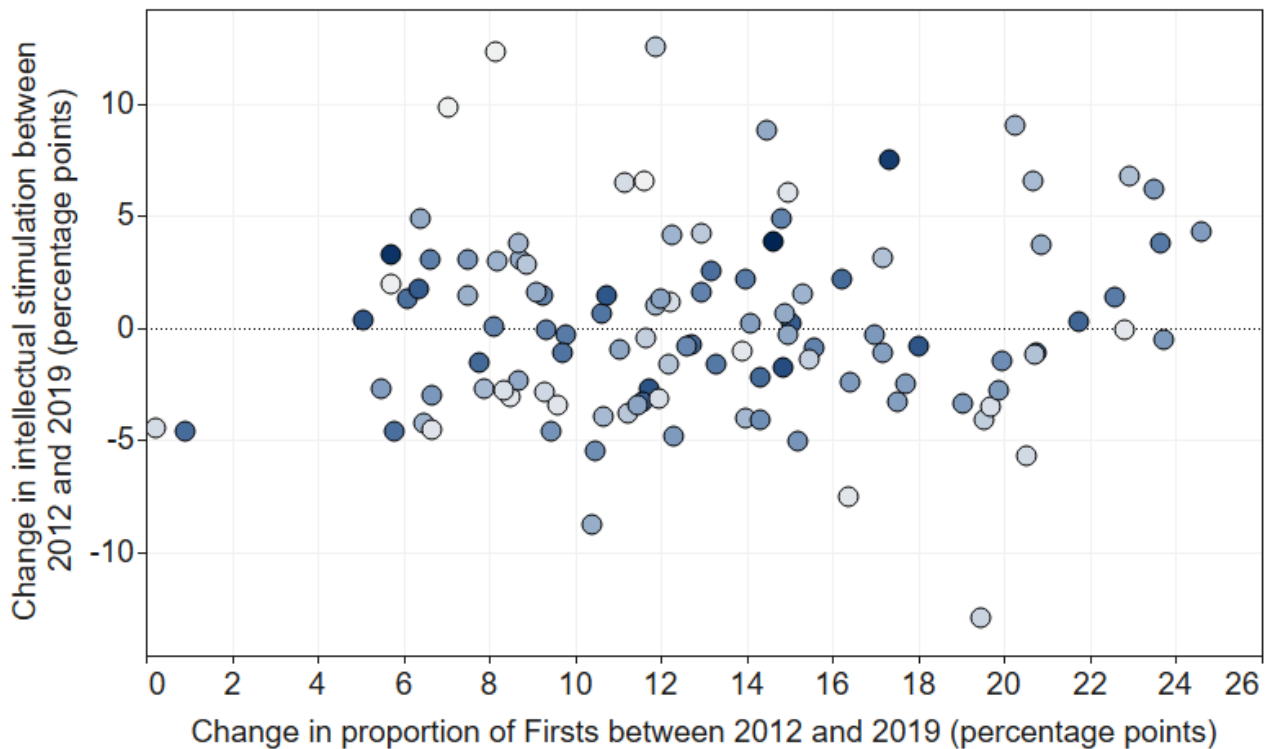

Conclusions

33. If providers were using degree classifications to leverage better NSS results, we would expect to see a correlation between an increase in first class degrees and an increase in overall satisfaction at a provider level. There is no such correlation. This suggests that if there is causal connection between grade inflation and the NSS it is a complex one, and that awarding more first class degrees is not a simple way to secure better NSS results. There is also no correlation between grade inflation and intellectual stimulation.

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[14] Each dot represents one provider. The colour of each dot is proportional to the number of NSS responses received by the provider in 2019.

Annex A: Statistical modelling methodology

Summary

1. We used statistical modelling to assess the impact of a range of factors on overall satisfaction. The primary motivation for this was to understand whether the differential rates of overall satisfaction observed between degree classes can be explained by other factors. The factors considered were:

    - degree classification
    - subject of study[15]
    - age[16]
    - entry qualifications
    - disability status
    - sex
    - ethnicity
    - country of domicile within the UK
    - provider
    - method of response to the NSS.

    Two years of data were included in the model: 2012 and 2019.

2. We have determined that the difference in overall satisfaction between degree classes is not explained by these other factors. There remains a significant difference in overall satisfaction between degree classes even when these factors are accounted for.

Details of the model

3. We used a logistic regression model to model the binary outcome of whether the student agreed that they were satisfied overall (1) or not (0).

4. The model equation is:

$$\begin{aligned} logit(Y) = {} & (\beta_1 * provider) + (\beta_2 * year) + (\beta_3 * degree\ class) + (\beta_4 * year * degree\ class) \\ & + (\beta_5 * subject\ of\ study) + (\beta_6 * age) + (\beta_7 * entry\ qualifications) \\ & + (\beta_8 * age * entry\ qualifications) + (\beta_9 * year * entry\ qualifications) + (\beta_{10} \\ & * disability\ status) + (\beta_{11} * sex) + (\beta_{12} * ethnicity) \\ & + (\beta_{13} * method\ of\ response) + (\beta_{14} * country\ of\ domicile) \end{aligned}$$

5. We included interactions between the following terms in the model:

    - Year and degree class, to account for the distribution of degree classes changing over time

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[15] According to Level 2 of the Common Aggregation Hierarchy.

[16] Students were categorised as young (21 and under) or mature (over 21).

- Age and entry qualifications, to account for entry qualifications varying dependent on the age of the student

- Year and entry qualifications, to account for grade inflation in entry qualifications.

6. Versions of the model were also run without the degree class and year terms, to better understand the effect of these terms in the model. Versions were also run without the interactions between year and degree class and year and entry qualifications.

7. Students who respond to the NSS are reported in the HESA student record, Individualised Learner Record (ILR), and in Northern Ireland FEC data. Only students reported in the HESA student record were included in the population for the modelling. This was a pragmatic choice to make combining student data and NSS data easier.

8. The population for the model was restricted to UK-domiciled students taught at providers in England. Only students who were taught and registered at the same provider were included. This was due to the fact that some terms in the model (e.g. degree classification) will be more influenced by the registering provider, and other terms will be more influenced by the teaching provider.

9. We acknowledge that some of the factors in the model are related to each other: for example, entry qualifications and degree classification. This is a common issue with multiple regression models and can make it more difficult to explain parameter estimates. To address this, we have examined both parameter estimates and predictions from the model, to ensure we are not relying solely on parameter estimates to make our judgements.

Findings

10. We have determined that the difference in overall satisfaction between degree classes is not explained by the other factors that we examined.

11. The primary indication from the modelling that this is the case is given by the parameter estimates, which are the coefficients in the model that describe how the outcome (i.e. overall satisfaction) is affected by changes in the predictor variables (e.g. degree classification). These estimates express how much more or less likely a student is to be satisfied if they are in one category (e.g. they have a first class degree) versus a reference category (students with upper second class degrees).[17] These are not straightforward to interpret directly, but they do give a measure of the direction of the effect and its size. The parameter estimates for degree class show that, when other factors are accounted for, students with first class degrees are more likely to report that they are satisfied overall than students with upper second class degrees, and students with other honours are less likely than students with upper second class.

12. We also produced estimated satisfaction rates for each degree class using a model that did not include degree classification as a factor. Comparing the estimated rates with the raw rates for each degree class provides another means of understanding the impact of degree classification on overall satisfaction. We observed that without degree classification included in the model, the difference in predicted overall satisfaction between the degree classes is much

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[17] The choice of reference category is not in itself meaningful, and only provides a basis for comparison with the other categories. The largest group is typically chosen as the reference category.

smaller than the difference observed in the raw data. This reaffirms that degree class is strongly associated with overall satisfaction.

13. Two years of data were included in the model to see whether any effects observed were stable over time. By looking at the parameter estimates for each year, we can detect changes in overall satisfaction between years that may be hidden in the raw data. Our findings suggest that when the other factors in the model are accounted for, there is a slight drop in overall satisfaction between 2012 and 2019. However, when year is removed from the model in the same way as described for degree class in paragraph 12, this effect is less pronounced, and the estimated satisfaction rates are still close to those observed in the raw data. This suggests that whatever the underlying trend of overall satisfaction is, its causes are complex and may be the product of several underlying and possibly counteracting trends.

Details of fixed effects

14. Estimates of fixed effects coefficients, their standard errors and p-values are shown in Table 1.

Table 1: Fixed effect coefficient estimates

Effect	Category[18]	Estimate	Standard error	p-value
Intercept	Intercept	2.001	0.191	<.0001
Year	2019	-0.241	0.036	<.0001
	2012 (ref)	-	-	-
Degree class	First class	0.425	0.023	<.0001
	Other honours	-0.453	0.018	<.0001
	Upper second class (ref)	-	-	-
Year (2019) * degree class	First class	0.038	0.028	0.1795
	Other honours	0.049	0.025	0.0472
	Upper second class (ref)	-	-	-
Subject of study	Medicine and dentistry	-0.368	0.191	0.0541
	Pharmacology, toxicology and pharmacy	0.622	0.062	<.0001
	Nursing and midwifery	0.079	0.035	0.0239
	Medical sciences	0.215	0.05	<.0001
	Allied health	0.357	0.033	<.0001
	Biosciences	0.459	0.034	<.0001
	Sport and exercise sciences	0.379	0.034	<.0001
	Psychology	0.213	0.027	<.0001
	Veterinary sciences	-0.111	0.183	0.5441
	Agriculture, food and related studies	0.298	0.084	0.0004
	Physics and astronomy	0.437	0.061	<.0001
	Chemistry	0.523	0.057	<.0001
	General, applied and forensic sciences	0.344	0.068	<.0001
	Mathematical sciences	0.267	0.041	<.0001
	Engineering	-0.117	0.028	<.0001
	Materials and technology	-0.272	0.063	<.0001
	Computing	-0.233	0.028	<.0001
	Architecture, building and planning	-0.038	0.036	0.2914
	Sociology, social policy and anthropology	0.219	0.029	<.0001
	Economics	-0.001	0.037	0.9852
	Politics	0.22	0.039	<.0001
	Health and social care	0.015	0.039	0.6934
	Law	0.296	0.029	<.0001
	English studies	0.364	0.03	<.0001

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[18] Categories marked with '(ref)' are the reference categories for each variable and are not formally included in the model structure.

Effect	Category[18]	Estimate	Standard error	p-value
	Celtic studies	1.086	1.037	0.2948
	Languages and area studies	0.156	0.038	<.0001
	History and archaeology	0.534	0.033	<.0001
	Philosophy and religious studies	0.466	0.055	<.0001
	Education and teaching	0.266	0.029	<.0001
	Combined and general studies	0.141	0.081	0.0813
	Media, journalism and communications	-0.224	0.028	<.0001
	Creative arts and design	-0.13	0.023	<.0001
	Performing arts	-0.031	0.03	0.3094
	Geography, earth and environmental studies	0.427	0.036	<.0001
	Business and management (ref)	-	-	-
Age	Mature	-0.147	0.112	0.1890
	Young (ref)	-	-	-
Entry qualifications	A-level: AAA and above (ref)	-	-	-
	A-level: AAB	0.009	0.039	0.8234
	A-level: AAC	0.076	0.075	0.3118
	A-level: ABB	0.052	0.041	0.2056
	A-level: ABC	0.013	0.047	0.7861
	A-level: ACC	-0.024	0.06	0.6900
	A-level: BBB	0.073	0.051	0.1501
	A-level: BBC	-0.007	0.044	0.8719
	A-level: BCC	0.012	0.042	0.7789
	A-level: CCC	0.007	0.043	0.8744
	A-level: CCD	0.034	0.046	0.4652
	A-level: CDD	0.037	0.05	0.4605
	A-level: DDD	0.066	0.06	0.2712
	A-level: Below DDD	0.015	0.066	0.8195
	BTEC: DDD and above	-0.111	0.051	0.0290
	BTEC: DDM	-0.097	0.069	0.1608
	BTEC: DMM	-0.292	0.073	<.0001
	BTEC: MMM and below	-0.123	0.056	0.0287
	1 A-level 2 BTECs	-0.039	0.095	0.6804
	2 A-levels 1 BTEC	0.022	0.087	0.7969
	International Baccalaureate	0.037	0.086	0.6714
	No Level 3 equivalent	0.014	0.067	0.8300
	Other Level 3	-0.065	0.039	0.0914
Age (mature) * entry qualifications	A-level: AAA and above (ref)	-	-	-
	A-level: AAB	0.246	0.17	0.1481
	A-level: AAC	0.01	0.27	0.9716
	A-level: ABB	-0.097	0.159	0.5416
	A-level: ABC	0.15	0.176	0.3917
	A-level: ACC	0.242	0.207	0.2427

Effect	Category[18]	Estimate	Standard error	p-value
	A-level: BBB	-0.06	0.182	0.7397
	A-level: BBC	-0.053	0.156	0.7331
	A-level: BCC	-0.066	0.143	0.6451
	A-level: CCC	0.178	0.144	0.2178
	A-level: CCD	0.015	0.145	0.9183
	A-level: CDD	0.175	0.154	0.2559
	A-level: DDD	0.095	0.166	0.5655
	A-level: Below DDD	0.284	0.169	0.0923
	BTEC: DDD and above	0.187	0.128	0.1441
	BTEC: DDM	0.14	0.156	0.3692
	BTEC: DMM	0.282	0.163	0.0844
	BTEC: MMM and below	0.109	0.132	0.4087
	1 A-level 2 BTECs	0.33	0.241	0.1708
	2 A-levels 1 BTEC	0.227	0.204	0.2672
	International Baccalaureate	0.205	0.23	0.3731
	No Level 3 equivalent	0.193	0.128	0.1310
	Other Level 3	0.205	0.115	0.0759
Year (2019) * entry qualifications	A-level: AAA and above (ref)	-	-	-
	A-level: AAB	-0.008	0.052	0.8757
	A-level: AAC	-0.104	0.098	0.2892
	A-level: ABB	-0.035	0.054	0.5166
	A-level: ABC	0.009	0.061	0.8831
	A-level: ACC	0.061	0.079	0.4369
	A-level: BBB	0.018	0.066	0.7858
	A-level: BBC	0.127	0.057	0.0260
	A-level: BCC	0.127	0.053	0.0161
	A-level: CCC	0.084	0.054	0.1207
	A-level: CCD	0.078	0.058	0.1820
	A-level: CDD	0.118	0.066	0.0742
	A-level: DDD	0.091	0.08	0.2596
	A-level: Below DDD	0.085	0.091	0.3541
	BTEC: DDD and above	0.119	0.058	0.0386
	BTEC: DDM	0.168	0.084	0.0466
	BTEC: DMM	0.421	0.092	<.0001
	BTEC: MMM and below	0.214	0.071	0.0026
	1 A-level 2 BTECs	0.148	0.107	0.1685
	2 A-levels 1 BTEC	0.057	0.094	0.5428
	International Baccalaureate	-0.143	0.112	0.2024
	No Level 3 equivalent	0.108	0.055	0.0503
	Other Level 3	0.161	0.045	0.0003
Disability status	Disabled	-0.13	0.015	<.0001
	Not disabled (ref)	-	-	-
Sex	Male	-0.01	0.011	0.3716
	Other	0.24	0.345	0.4861
	Female (ref)	-	-	-

Effect	Category[18]	Estimate	Standard error	p-value
Ethnicity	Asian	-0.021	0.017	0.2211
	Black	0.047	0.022	0.0323
	Mixed	-0.122	0.025	<.0001
	Other	-0.047	0.043	0.2735
	Unknown	-0.297	0.05	<.0001
	White (ref)	-	-	-
Method of response	Post	-0.121	0.039	0.0017
	Phone	0.268	0.014	<.0001
	Online (ref)	-	-	-
Country of domicile	Northern Ireland	0.063	0.053	0.2354
	Scotland	0.108	0.074	0.1438
	Wales	-0.013	0.035	0.7125
	England (ref)	-	-	-