

The Teaching Excellence and Student Outcomes Framework (TEF) and demand for full-time undergraduate higher education

June 2018

Executive summary

The Teaching Excellence and Student Outcomes Framework (TEF), developed by the Department for Education in England, is intended to provide information about teaching quality and the learning experience, to help prospective students choose where to study. Providers are given either a gold, silver, bronze, or provisional rating, based on a set of metrics, an institutional submission, and contextual data around student intake and employment outcomes.

In June 2017, the TEF awards for 295 higher education providers were published as part of the TEF Year Two outcomes. Publication of TEF awards prior to the opening of the 2018 UCAS Undergraduate admissions cycle meant this was the first complete cycle in which applicants could use the TEF to inform decisions about the university or college to which they applied. This report, based on operational and survey-derived data on UCAS applicants, draws conclusions about the level of awareness of the TEF among applicants, the importance assigned to it, and how these relate to where they applied.

Key findings

Analysis, based on the responses of more than 85,000 applicants surveyed shortly after submitting their applications, suggests that fewer than one in five applicants who applied by the 15 January equal consideration deadline, knew what the TEF was prior to applying.

Applicants from the UK were twice as likely to know what the TEF was, compared to applicants from the EU, and those from outside the EU.

Among applicants who knew what the TEF was, almost all of them knew the TEF rating awarded to at least some of the providers they applied to, and three in every five said the TEF awards were important, or extremely important, when deciding where to apply.

Among applicants that did not know what the TEF was, three out of every five said they would have found the awards important, or extremely important, had they known about them. This suggests that had all 15 January deadline applicants known about the TEF, there would have been five to six times the number of applicants in 2018 than we currently estimate, who would have found the TEF awards important when deciding where to apply.

Applicants who knew about the TEF before applying made more applications, on average, to gold award providers, compared to applicants who did not know about the TEF. Similarly, applicants who said the TEF awards were important when deciding where to apply, made more applications to gold award providers, on average, than those who said they were not important. These patterns were found to exist after controlling for other factors that affect where applicants apply.

Between 2011 and 2017, there was a steady increase in the share of applications to providers subsequently awarded gold ratings, and reductions in the shares of applications to providers subsequently awarded silver or bronze ratings. These trends continued into 2018, after the publication of the TEF Year Two outcomes. Differences between a provider's observed share of applications, and what might have been expected given these trends, were found to not be related to the TEF awards.

The absence of any relationship between the share of applications across TEF awards is likely to reflect the low awareness of the TEF among applicants.

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In June 2017, the TEF awards for 295 higher education providers were published as part of the TEF Year Two outcomes. Of these, 60 providers were awarded gold, 115 providers were awarded silver, and 56 awarded bronze¹.

Publication of TEF awards prior to the opening of the 2018 UCAS Undergraduate admissions cycle meant this was the first complete cycle in which applicants could use the TEF to inform decisions about the university or college to which they applied.

Survey responses reveal the level of awareness of the TEF among applicants, and the importance they assign to the awards

Each cycle, every applicant is invited by UCAS to complete a survey about their application experience. In 2018, the survey included four questions about the TEF, to determine the level of awareness of the TEF among applicants, and the importance they assigned to the awards. Details of the questions relating to the TEF are given in Annex A.

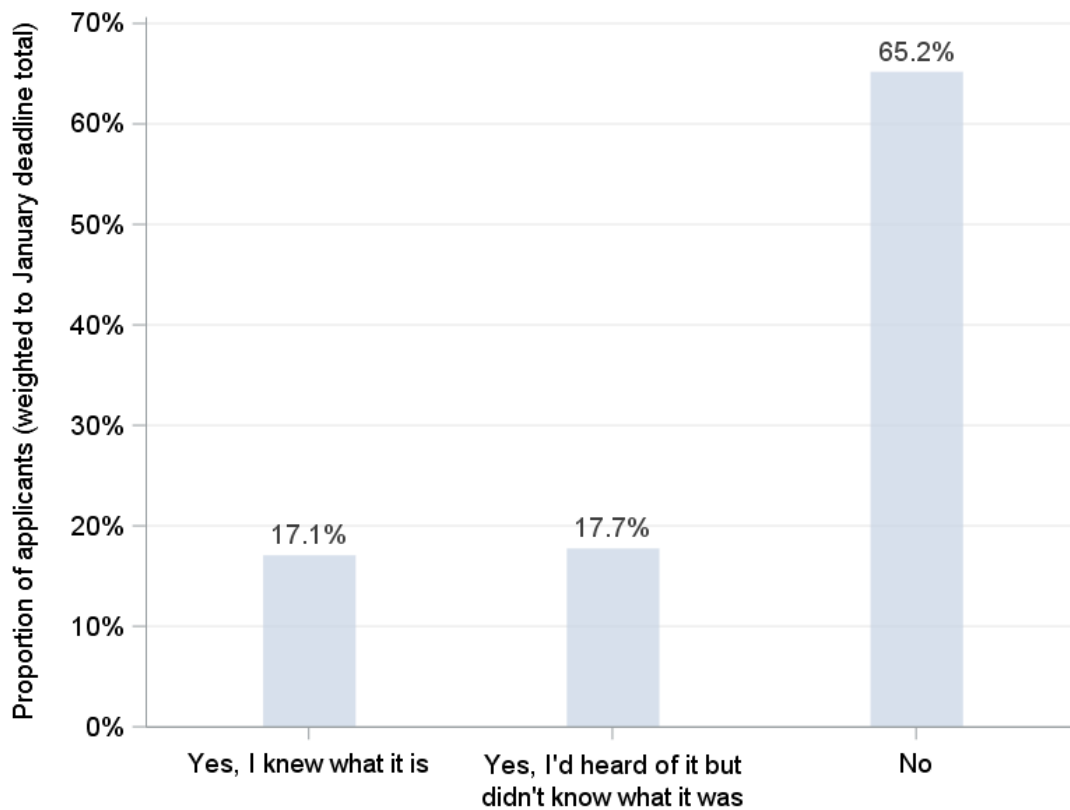
Over half a million applicants applied by the 15 January deadline, and of these more than 85,000 responded to the questions about the TEF – a response rate of more than 15 per cent. Responses were weighted back to the number of applicants at the January deadline, to correct for variations in response rates across different groups of applicants, and to ensure subsequent analysis was representative of the applicant population. All findings reported here are based on the weighted responses, unless otherwise stated.

¹ Following appeal, the TEF Year Two outcome for one provider was amended in August 2017 www.officeforstudents.org.uk/advice-and-guidance/teaching/what-is-the-tef/. Data used in this analysis reflects this amendment.

One in five applicants in 2018 knew what the TEF was before applying

Applicants were first asked whether they had heard of the TEF prior to making their applications. The responses, summarised in Figure 1, suggest around 17 per cent of applicants had heard of the TEF, and knew what it was prior to making their applications. A further 18 per cent had heard of the TEF but did not know what it was. Most applicants (65 per cent) had not heard of the TEF prior to application.

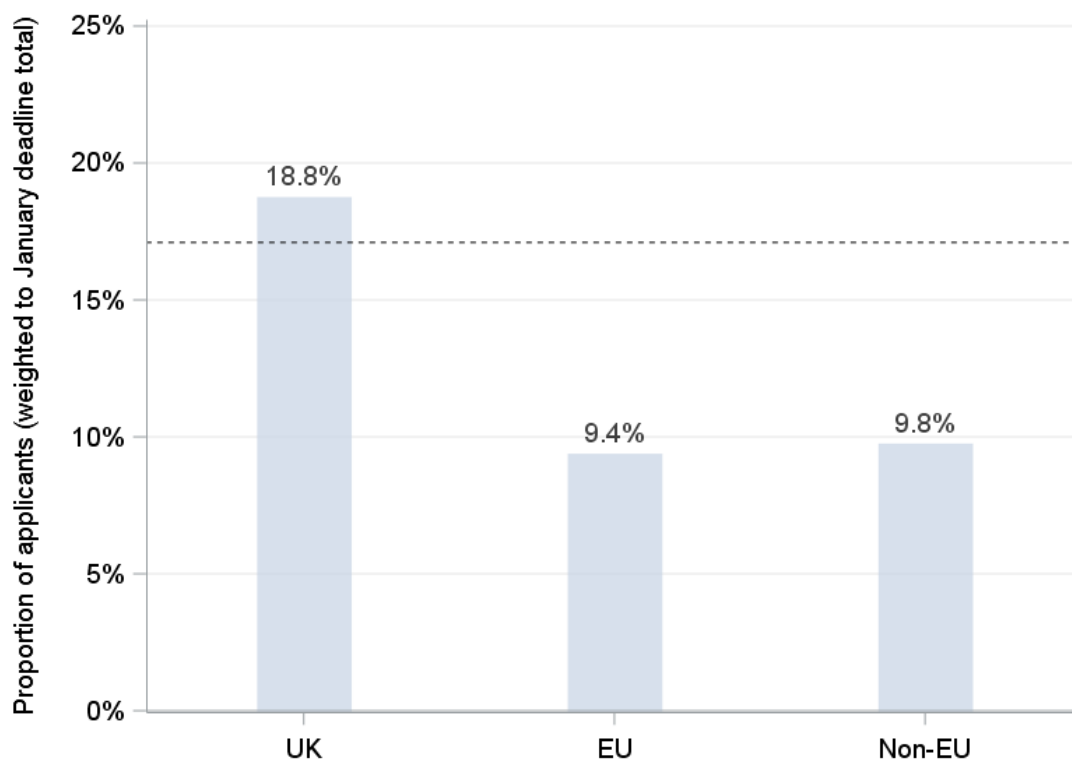
Figure 1: Awareness of the TEF among applicants



Applicants from the UK are twice as likely to know what the TEF is, compared to applicants from the EU, and applicants from outside the EU

The share of applicants who said they knew about the TEF, split by whether they were domiciled in the UK, EU, or outside the EU, is shown in Figure 2. The results suggest that UK domiciled applicants were twice as likely to have known about the TEF when applying, compared to non-UK applicants. 19 per cent of UK domiciled applicants knew what the TEF was when applying, compared to 9 per cent of EU domiciled applicants, and 10 per cent of non-EU applicants.

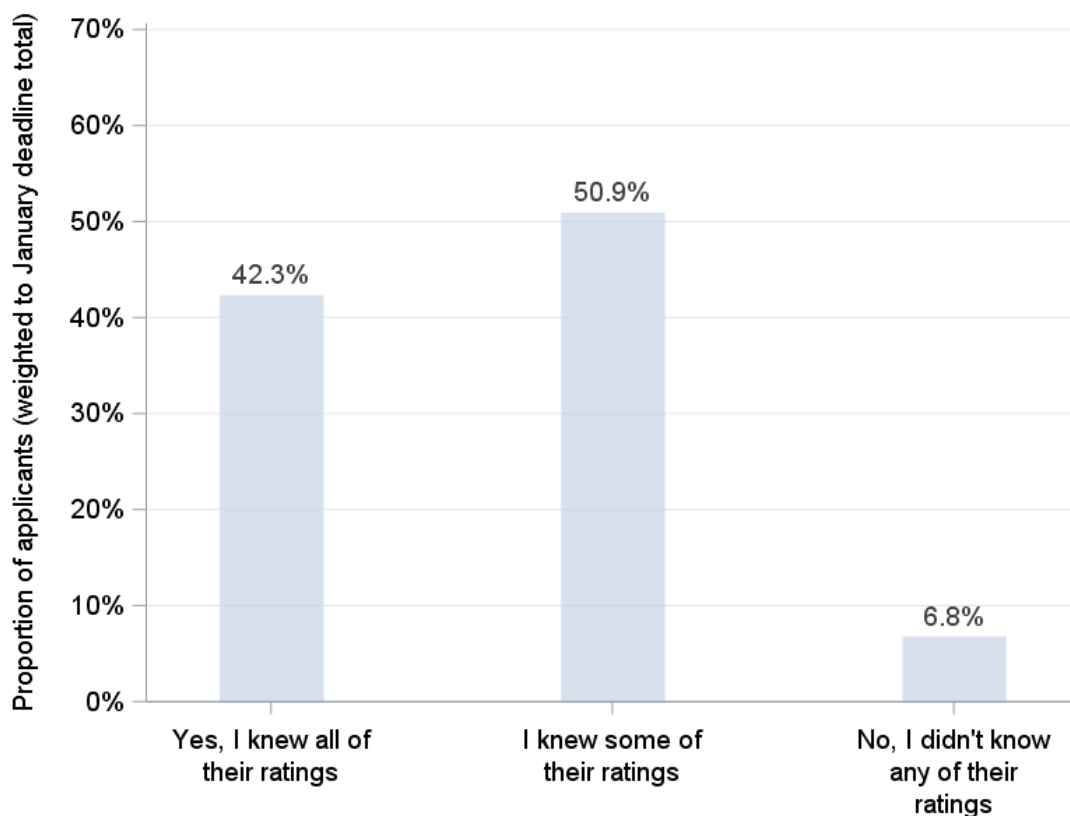
Figure 2: Proportion of applicants who knew about the TEF when applying, by domicile (dotted line is the proportion of all applicants)



Nearly all applicants who knew about the TEF knew the awards for some or all providers to which they applied

To further investigate the level of awareness of the TEF, applicants who said they knew what the TEF was before applying were subsequently asked whether they knew the ratings of the providers they applied to. The results are summarised in Figure 3, and suggest that 42 per cent of applicants who knew what the TEF was, also knew the TEF ratings for all the providers to which they applied. A further 51 per cent knew the ratings for some of the providers they applied to.

Figure 3: Knowledge of TEF awards for the providers applied to among applicants who knew about the TEF when applying

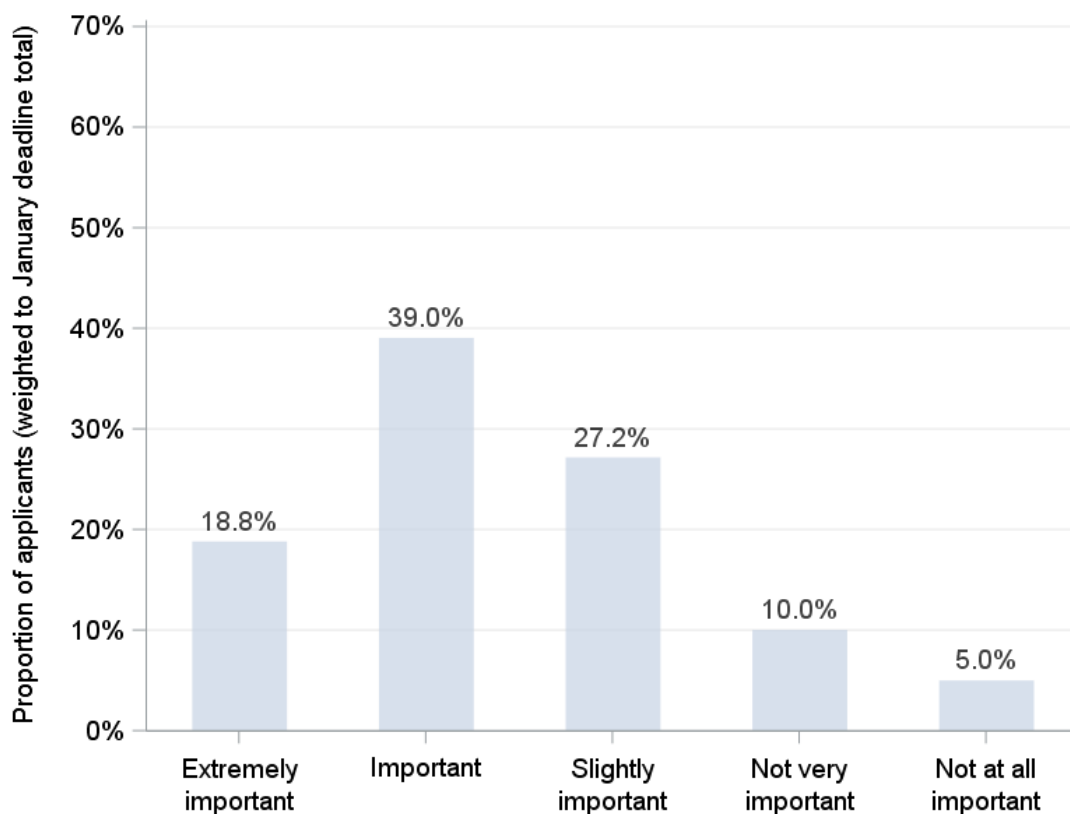


Three in every five applicants who knew about the TEF said the awards were important, or extremely important, when deciding where to apply

Applicants who reported knowing what the TEF was prior to applying were also asked to state how important the TEF awards were when deciding where to apply. The importance applicants assign to the TEF awards will likely reflect the extent to which they influence where they choose to apply. The responses to this question are summarised in Figure 4.

When asked how important the TEF awards were when deciding where to apply, 19 per cent of applicants said the awards were extremely important, 39 per cent said they were important, and 27 per cent said they were slightly important. Since 17 per cent of applicants knew what the TEF was before applying (Figure 1), these proportions can be further adjusted to reflect the importance of the TEF awards among all applicants, including those who did not know what the TEF was. These adjustments suggest that 3 per cent of all January deadline applicants in 2018 knew what the TEF was and found the awards extremely important when deciding where to apply. A further 7 per cent of all applicants found the TEF awards important, and 5 per cent said they were slightly important.

Figure 4: Importance of TEF awards in deciding where to apply, among applicants who knew about the TEF when applying



Most applicants who did not know about the TEF said the awards would have been important when deciding where to apply, had they known about them

Low awareness of the TEF among applicants meant only a small proportion of applicants knew the awards of the providers they applied to, and found them important, or extremely important, when deciding where to apply. Understanding whether applicants who did not know about the TEF would have found the awards important is also of interest.

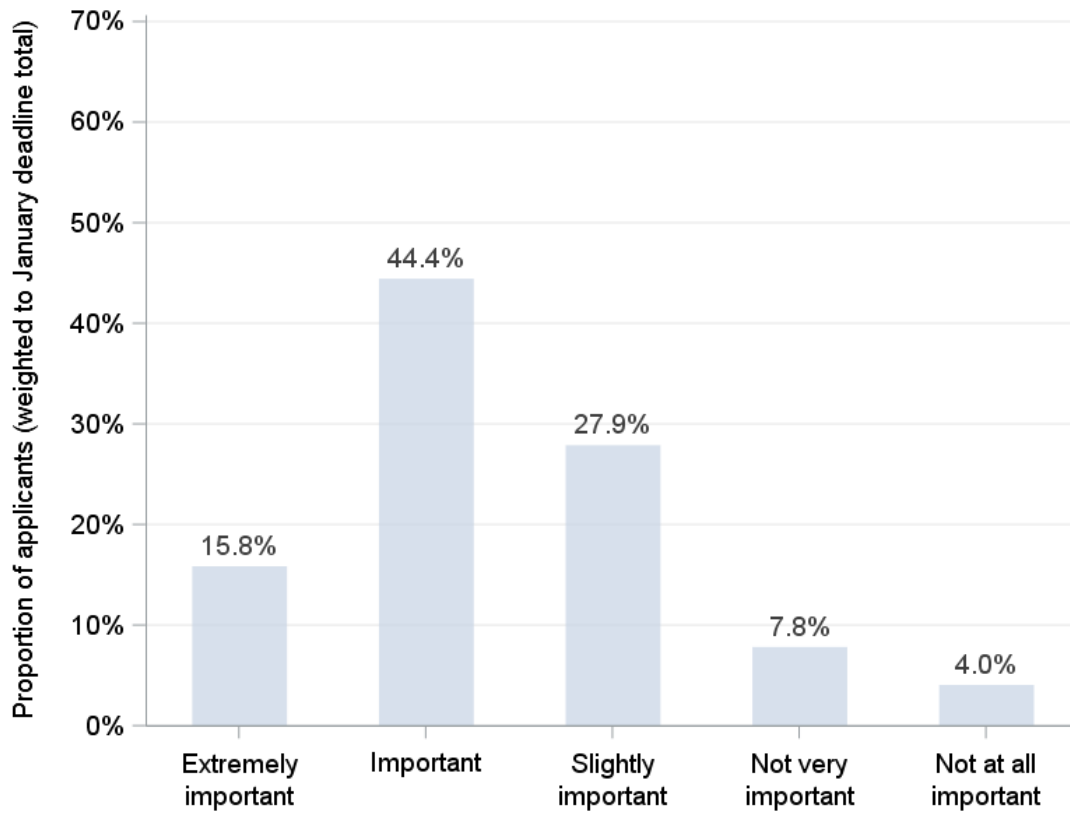
To determine this, applicants who said they did not know what the TEF was before applying were given a short description of the TEF, then asked to state how important they thought TEF awards would have been in helping them decide which universities to apply to, had they known about them. The responses to this question are summarised in Figure 5.

Because applicants had to predict to how important the TEF awards would have been in deciding where to apply, rather than how important they actually were, the responses to this question are prone to a higher degree of uncertainty than the responses to the other questions reported above. However, the predicted levels of importance given to the TEF awards by applicants who did not know what the TEF was, are very similar to the levels of actual importance given by applicants who did know what the TEF was, providing a level of assurance for the veracity of the responses.

The results suggest that 16 per cent of applicants thought the TEF awards would have been extremely important when deciding where to apply, had they known about them. A further 44 per cent of applicants thought they would have been important, and 28 per cent said they would have been slightly important.

By adding the number of responses across both questions, for a fixed level of stated importance, we can estimate the total number of applicants who would have found the TEF awards important, had they known about them. Had all applicants who responded to the survey been aware of the TEF, there would have been around five times the number of applicants who found the TEF awards extremely important, around six times the number who found them important, and between five and six times the number who found them slightly important.

Figure 5: Predicted importance of the TEF awards in deciding where to apply, had they known about them, among applicants who did not know about the TEF when applying



Awareness of the TEF is associated with an increased probability of applying to providers awarded a gold rating

The TEF awards are designed to be used by prospective students, alongside other sources of information, to help them decide where to apply. We can seek to determine whether the TEF may have influenced application decisions, by comparing the choices of applicants who reported knowing what the TEF was, with those who did not know what the TEF was.

Table 1 shows the average number of applications made to gold, silver, and bronze award providers according to level of TEF awareness, controlling for any differences in the total number of choices made across level of awareness by only including applicants who made five choices. Applicants who were more aware of the TEF made more applications, on average, to gold award providers.

Table 1: Average number of applications to gold, silver, and bronze award providers by level of TEF awareness

Awareness	Gold	Silver	Bronze	Provisional	No award
Yes, I knew what it was	2.1	2.2	0.5	<0.1	0.3
Yes, I'd heard of it but didn't know what it was	1.7	2.3	0.5	<0.1	0.5
No	1.4	2.3	0.6	<0.1	0.8
Total	1.6	2.2	0.5	<0.1	0.6

The tendency among applicants who are aware of the TEF to apply to gold award providers (shown in Table 1) does not account for other factors that may be correlated with both where applicants apply, and how aware they are of the TEF. For example, whether an applicant chose to apply to a gold award provider is likely to depend on their attainment (both in terms of any qualifications they are predicted to achieve, and any qualifications they have already achieved), the subject they wish to study, whether they wish to live at home while studying, and any other factors they consider to be important when deciding where to study.

To better understand the association between awareness of the TEF and where applicants apply, these other factors should ideally be controlled for. If an association between TEF awareness and where applicants apply remains after controlling for these other factors, we can be more confident such an association is real. A statistical modelling approach enables this, and is used to test the hypothesis that awareness of the TEF is associated with an increase in the probability that an applicant would apply to a gold award provider.

Two approaches were taken for the statistical modelling. The first was to model whether each applicant made a certain number of applications to gold award providers. Binary logistic regression models were used for this purpose, with separate models built to predict the probability an applicant would make at least one, at least two, and at least three applications to gold award providers. Fixed and random effect approaches were used – the latter to account for correlations in applicant behaviour among applicants from the same school. Results for both formulations were similar, with findings from the fixed effect logistic regression models reported below. Full details of the parameter estimates and model fit statistics are available to [download](#).

The second, more generalised approach was to model the number of choices each applicant made to gold award providers. Cumulative logistic regression models (also known as

proportional odds models) were used for this purpose. These models, which included generalised and partial proportional odds formulations, did not fit the data as well as the binary models described above, so the results are not included here. Despite this, cumulative logistic regression models gave similar estimates for the association between TEF awareness and applications to gold award providers, as the binary logistic regression models.

The data used to model the relationship between TEF awareness and applications to gold award providers was restricted to 18 year old applicants from England, who were predicted to achieve three A levels, responded to the survey question about level of TEF awareness, and who submitted five applications by the 15 January equal consideration deadline to either gold, silver, or bronze award providers (a total of 18,340 applicants). Unweighted survey responses were used. The range, accuracy and coverage of data for this group of applicants is far greater than for other applicants, meaning a greater array of factors could be controlled for, allowing a more accurate assessment of the relationship between awareness of the TEF and where applicants apply.

The response to the survey question on level of TEF awareness was included in the model, alongside factors controlling for predicted A level attainment, achieved GCSE attainment, school type attended, where the applicant lived, background characteristics (sex, ethnic group, and POLAR4 quintile), the number of days before the January deadline the applications were submitted, the number of applications made for which the applicant intended to live at home while studying, and other factors the applicant said were important when applying (for example a university's league table position, the cost of living while attending a university, and social life and activities available at a university) drawn from the same survey that asked about the TEF.

For each of the fixed effects logistic models, there was a statistically significant association between the level of awareness of the TEF, and the probability of applying to a gold award provider, after controlling for all other factors in the model (Table 2).

It was found that, on average, the odds of making at least one application to a gold award provider were 2.1 times higher for survey respondents who knew what the TEF was, compared to applicants who did not know about the TEF. This is equivalent to an 8 per cent increase in the probability of making at least one application to a gold award provider, simply due to being aware of the TEF (assuming the typical probability of doing so among those unaware of the TEF was 85 per cent – the proportion observed in the data).

Similarly, the odds of making at least one application to a gold award provider were 1.3 times higher for those who knew what the TEF was, compared to those who had heard of the TEF but didn't know what it was. This is equivalent to a 3 per cent increase in the probability of making at least one such application, compared to the typical probability of doing so of 90 per cent (the proportion observed in the data).

The odds, and therefore the probability, of making either at least two, or at least three applications, to gold award providers, according to level of TEF awareness, are also higher among applicants with a greater awareness of the TEF, after controlling for other factors in the models. For example, there is, on average, a 21 per cent increase in the probability of making at least two applications to gold award providers, associated with being aware of the TEF compared to not being aware, and a 41 per cent increase in the probability of making at least three applications.

Table 2: Odds ratios and associated increases in probabilities of making at least one, two, or three applications to gold award providers, according to level of TEF awareness

Comparison (reference group in brackets)	Number of applications to gold award providers	Odds ratio	Observed probability of reference group	Estimated probability	Percentage point (pp) difference from observed probability	Percentage difference from observed probability
'Yes, I knew what it was' (vs 'No')	One or more	2.1	85%	92%	7pp	8%
	Two or more	1.8	61%	74%	13pp	21%
	Three or more	1.7	31%	44%	13pp	41%
'Yes, I knew what it was' (vs 'Yes, I'd heard of it but didn't know what it was')	One or more	1.3	90%	92%	2pp	3%
	Two or more	1.3	69%	75%	6pp	11%
	Three or more	1.3	39%	45%	6pp	15%

It is important to note that the findings from the statistical models reported above assume the models are properly specified – that they control for all factors that are important in predicting how many applications to gold award providers an applicant makes. Any factors not included in the models that are correlated with both the level of TEF awareness and the number of applications to gold award providers, could result in different, potentially lower, estimates from those reported in Table 2.

An example of such a factor is the extent to which applicants gain awareness of the TEF by virtue of where they applied. If gold award providers were more likely to reference their TEF award than other providers – for example, on their websites or marketing material – this could increase the likelihood that applicants who apply to them are aware of the TEF. This would be the case even if a provider's TEF award was not a factor in an applicant's decision to apply. This, in turn, would act to increase the measured association between being aware of the TEF and applying to a gold award provider (as reported above), such that the effect of being aware of the TEF is overestimated.

Viewing the TEF ratings as important is associated with an increased probability of applying to gold award providers

One way to reduce the risk of overestimating any association between the TEF and where applicants apply, is instead to model the relationship between how important applicants say the TEF ratings were when deciding where to apply, and where they ultimately applied. Because all applicants who responded to the question of importance already knew what the TEF was, a more accurate estimate of the association between the TEF awards and where applicants apply can be determined.

Table 3 shows the average number of applications made to gold, silver, and bronze award providers, for applicants grouped according to how important they said the TEF awards were when deciding where to apply. Although applicants who said the TEF awards were extremely important or important made, on average, more applications to gold award providers, and fewer applications to silver award providers, compared to applicants who said the TEF awards were slightly important, not very important, or not at all important, the differences are marginal.

Table 3: Average number of applications to gold, silver, and bronze award providers by the level of importance applicants gave the TEF awards when deciding where to apply

Importance of the TEF awards	Gold	Silver	Bronze	Provisional	No award
Extremely important	2.0	2.1	0.5	<0.1	0.3
Important	2.1	2.2	0.5	<0.1	0.3
Slightly important	2.0	2.2	0.5	<0.1	0.3
Not very important	2.0	2.2	0.5	<0.1	0.3
Not at all important	1.9	2.1	0.5	<0.1	0.5
All	2.0	2.2	0.5	<0.1	0.3

To control for other factors that might affect the patterns in Table 3, a statistical modelling approach was taken to understand the relationship between how important applicants said the TEF awards were when deciding where to apply, and where they ultimately applied. As with the analysis on TEF awareness, the statistical models were based on the unweighted survey responses of English 18 year old applicants who were predicted to achieve three A levels, and who made five choices by the 15 January equal consideration deadline to either gold, silver, or bronze award providers (4,980 applicants). The models controlled for attainment (predicted A levels and achieved GCSEs), the school type attended, where the applicant lived, background characteristics (sex, ethnic group, and POLAR4 quintile), the number of days before the January deadline applications were submitted, the number of 'live at home' choices, and other factors the applicant said were important when applying, such as league table position, cost of living, and social life. Separate models were used to predict the probability of making at least two, or at least three applications to gold award providers.²

For each of the models, there was a statistically significant association between the level of importance assigned to the TEF awards, and the probability of applying to a gold award provider, after controlling for all other factors in the model (Table 4). Full details of the parameter estimates and model fit statistics are available to [download](#).

² Logistic regression models to predict the probability of applying to at least one gold award provider did not converge on a solution.

It was found that, on average, the odds of making at least two applications to gold award providers were 1.8 times higher among survey respondents who said the TEF awards were either important or extremely important, compared to applicants who said they were slightly, not very, or not at all important. This is equivalent to a 12 per cent increase in the probability of making at least two applications to gold award providers, simply due to being aware of the TEF, and thinking the awards were important (assuming the typical probability of doing so among those who said the awards were either slightly, not very or not at all important was 76 per cent – the proportion observed in the data).

The odds, and therefore the probability, of making at least three applications to gold award providers, according to level of importance assigned to the TEF awards, are also higher among applicants who said the awards were important or extremely important, after controlling for other factors. There is a 27 per cent increase in the probability of making at least three applications to gold award providers among applicants who say the TEF ratings are important or extremely important, compared to those who do not (assuming the typical probability of doing so among those who said the awards were either slightly, not very or not at all important was 45 per cent – the proportion observed in the data).

Table 4: Odds ratios and increases in probabilities of making at least two or three applications to gold award providers, according to the stated importance of TEF awards

Comparison (reference group in brackets)	Number of applications to gold award providers	Odds ratio	Observed probability of reference group	Estimated probability	Percentage point (pp) difference from observed probability	Percentage difference from observed probability
'Important, or Extremely important' (vs 'Slightly important', 'Not very important' or 'Not at all important')	Two or more	1.8	76%	85%	9pp	12%
	Three or more	1.6	45%	57%	12pp	27%

Share of applications to gold award providers has been increasing since 2011

Figure 6 shows the share of all applications made by the 15 January equal consideration deadline, between 2011 and 2018, for the largest 124 providers that use UCAS, grouped according to their TEF award³.

Across the period, the share of applications to providers with different TEF awards has changed. The share of applications to gold award providers increased every year, from 29.9 per cent in 2011, to 34.7 per cent in 2018. The share of applications to silver and bronze award providers fell across the period, from 55.6 per cent in 2011, to 52.9 per cent in 2018 for silver award providers, and from 14.5 per cent to 12.5 per cent over the same period for bronze award providers.

This pattern is seen more clearly in Figure 7, which shows the trends in the share of total applications across the TEF groups, by referencing the share in each year relative to the share in 2017.

Together, Figures 6 and 7 suggest the share of applications to gold, silver, and bronze award providers in 2018 was very close to what might have been expected given the trends for each group between 2011 and 2017. Analysis – described in full in Annex B – suggests any differences between the observed shares of applications at individual providers in 2018, and those that might be expected given recent trends, are not related to the TEF awards.

Similar results are found for UK domiciled applicants (Figures 8 and 9), and for applicants domiciled outside the UK (Figures 10 and 11).

These results are likely to reflect the low awareness of the TEF among applicants, reported in Figure 1. Under the assumption that being aware of the TEF influenced applicants' choices, the pattern of applications across TEF awards in 2018 might be different for those who knew what the TEF was, compared to those who did not. Furthermore, the choices of applicants who did not know what the TEF was would be expected to continue, following the longer-term trend established between 2011 and 2017, since there is no reason to assume the choices made by this group would differ in 2018. However, because applicants who knew what the TEF was comprise a relatively small proportion of all applicants (17 per cent), any effect on the overall pattern in 2018 will also be small. Instead, the dominant pattern in 2018 will be that of applicants who did not know what the TEF was.

³ Analysis in Figures 6 to 11 is limited to the 124 largest providers to which applicants can apply to full-time undergraduate degree courses through UCAS, defined as those with at least 500 acceptances on average between 2012 and 2017, and for which a TEF award of gold, silver, or bronze was published in June 2017. This forms a fixed grouping of providers over time, and ensures the trends are unaffected by changes in the number or type of providers considered across the period. This group of providers accounted for around 86 per cent of all applications through UCAS at the 15 January deadline in each year. In this group, 36 providers were awarded gold, 65 providers awarded silver, and 23 providers awarded bronze.

Figure 6: Share of all 15 January deadline applications by TEF award and year

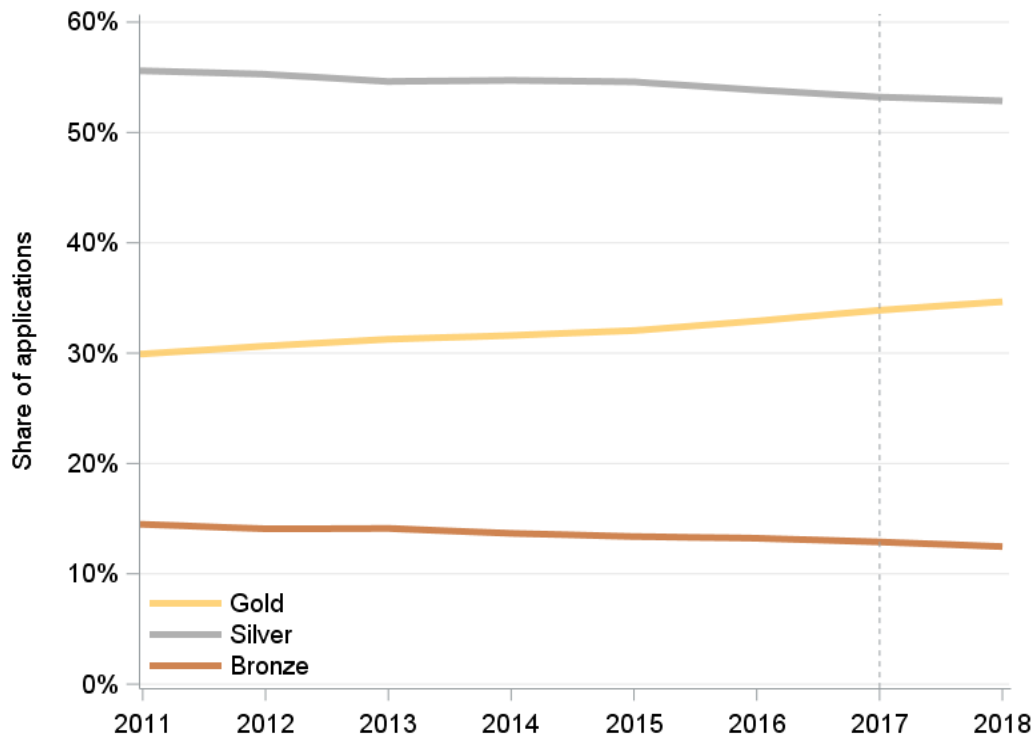


Figure 7: Percentage change in the share of all 15 January deadline applications, indexed to 2017, by TEF award and year

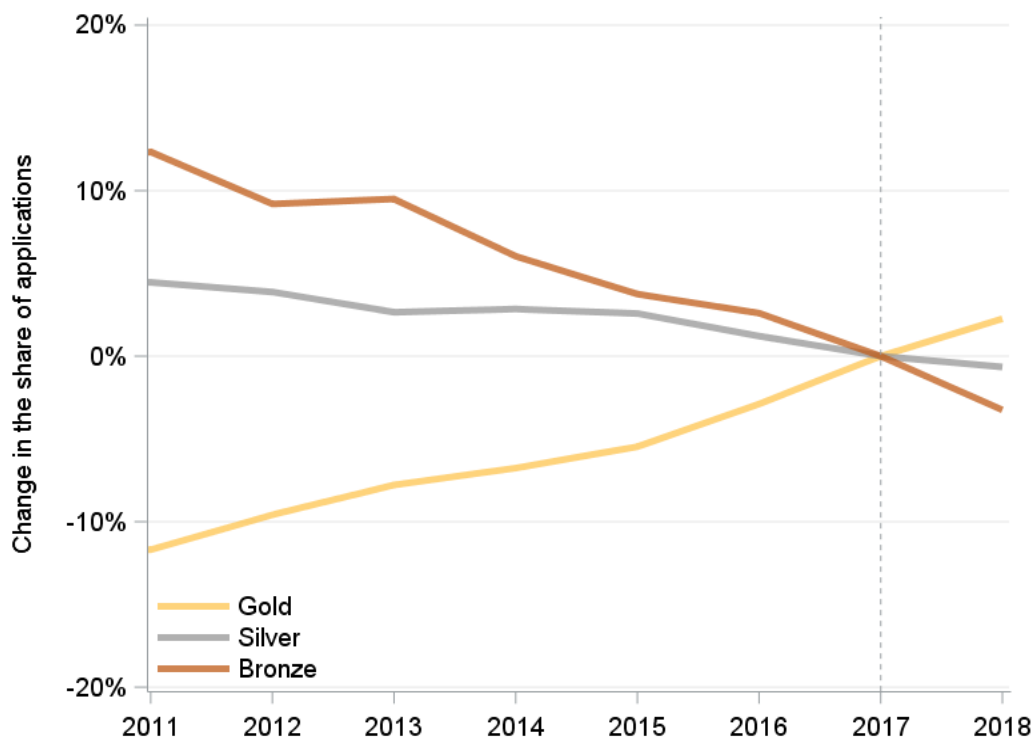


Figure 8: Share of 15 January deadline applications from UK applicants by TEF group and year

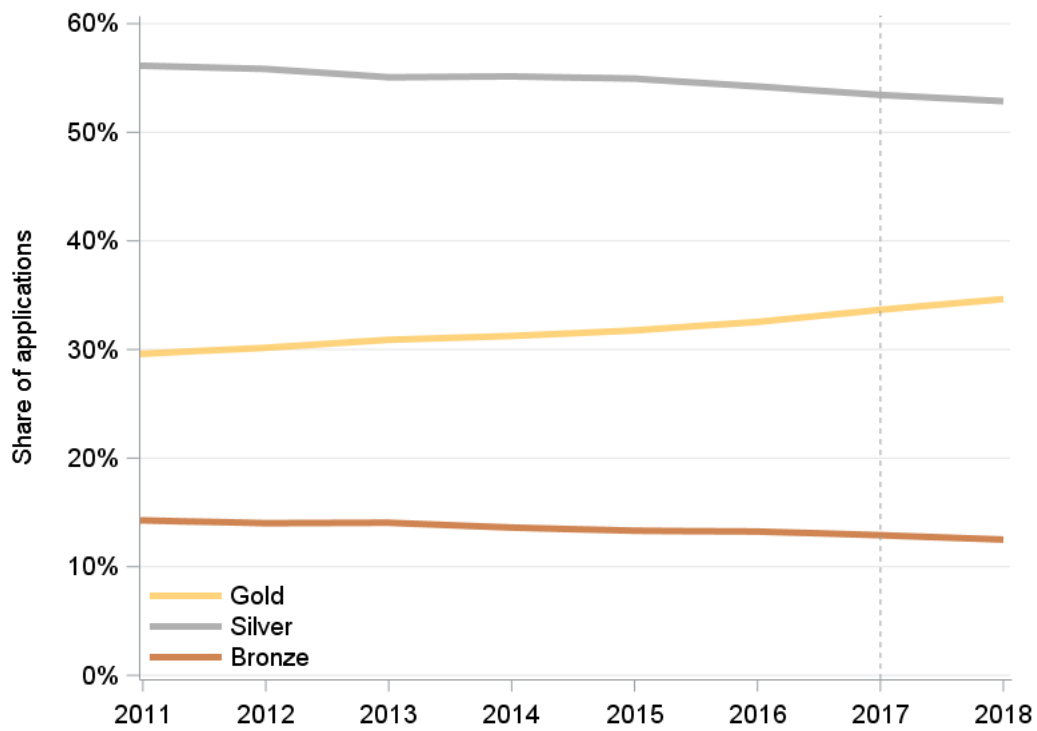


Figure 9: Percentage change in the share of 15 January deadline applications from UK applicants, indexed to 2017, by TEF group and year

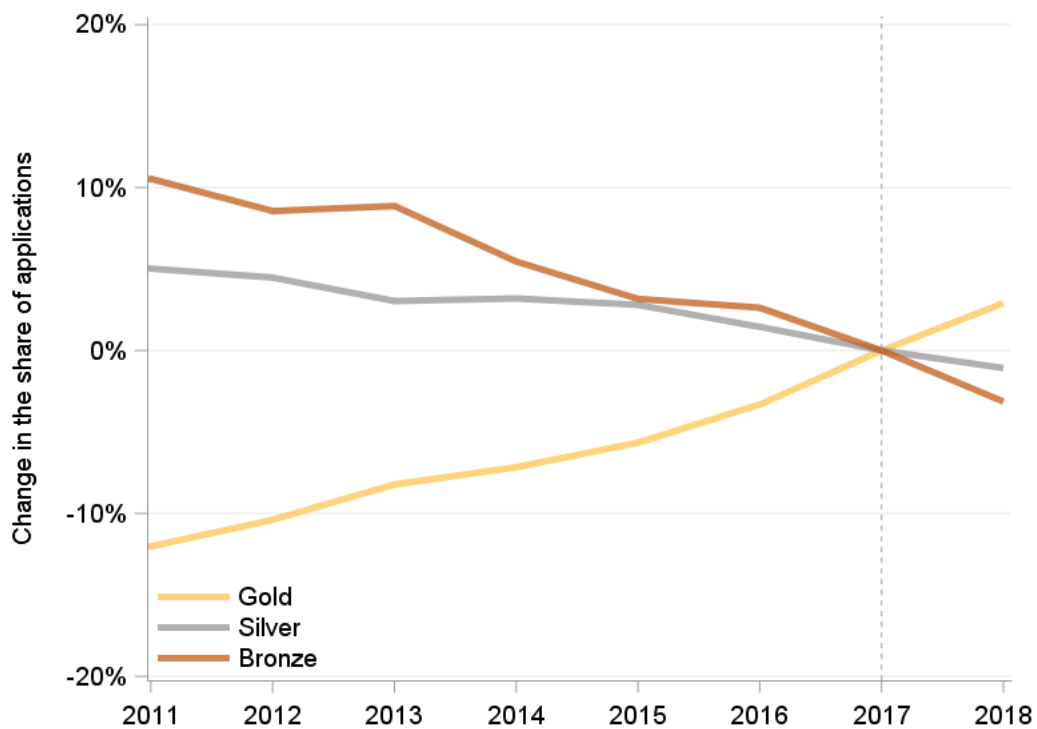


Figure 10: Share of 15 January deadline applications from non-UK applicants by TEF group and year

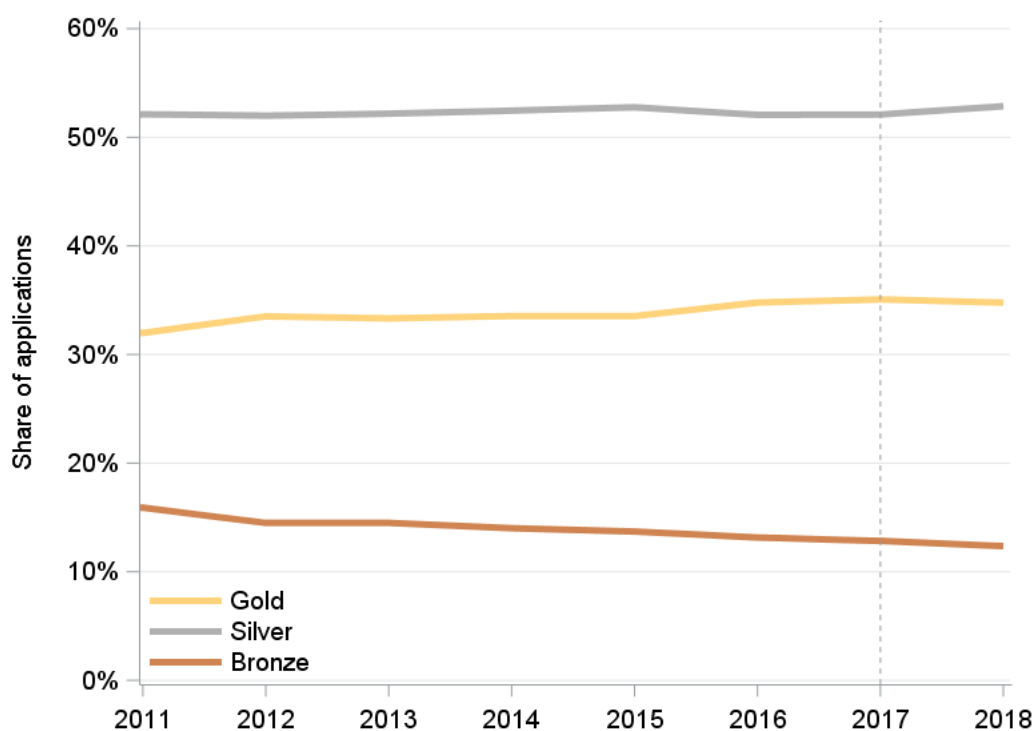
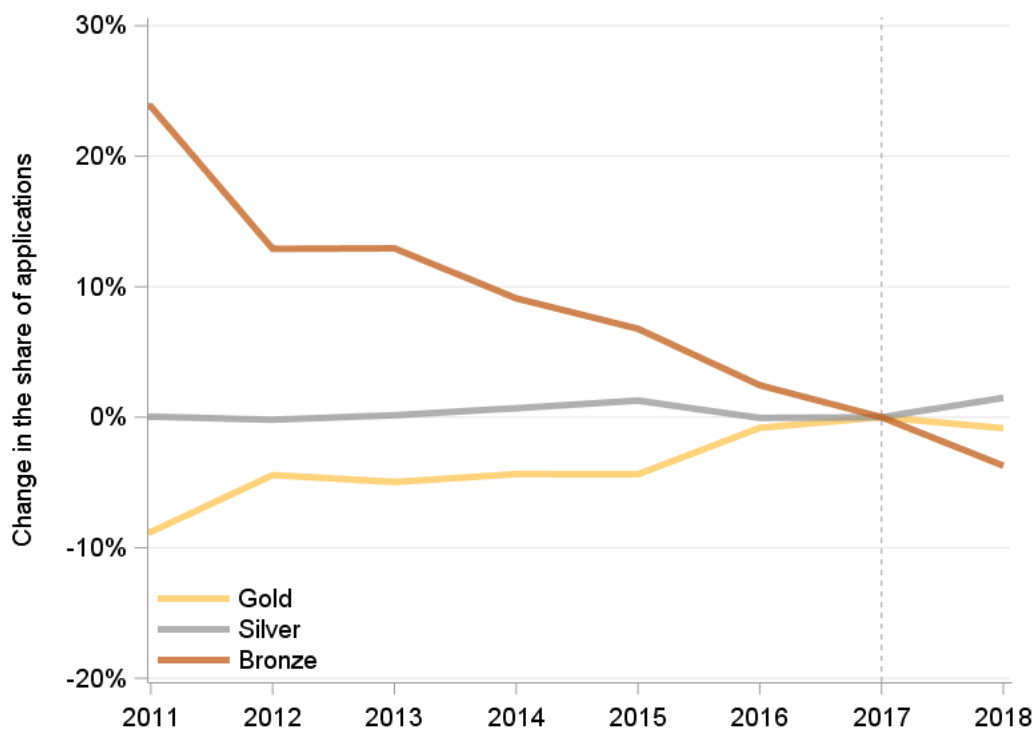


Figure 11: Percentage change in the share of 15 January deadline applications from non-UK applicants, indexed to 2017, by TEF group and year



Annex A: Survey questions relating to the TEF

A few days after submitting their applications, every applicant was asked to complete an online survey about their application experience. The survey questions vary between application cycles – in 2018, there were 28 questions. Applicants were encouraged to complete the survey by being included in a prize draw to win £1,000 after submitting their responses. More than 85,000 applicants who applied by the 15 January equal consideration deadline, responded to the survey.

Four questions (questions 6, 7, 8, and 9 in the survey) related to the TEF. These questions are detailed below, along with the number of responses.

Question 6

This question was asked to all applicants.

'The Teaching Excellence Framework (TEF) has been introduced by government to encourage excellent teaching in universities and colleges. It is intended to help students choose where to study by providing clear information about teaching provision and student outcomes. Before making your application through UCAS had you heard of the TEF?'

Table A.1: Responses to question 6 of the applicant survey

Response	Number of responses	Proportion of total responses (%)	Proportion (adjusted for non-response bias) (%)
Yes, I knew what it was	14,730	17.2	17.1
Yes, I'd heard of it but didn't know what it was	15,300	17.9	17.7
No	55,650	65.0	65.2
Total	85,690	100	100

Table A.2: Responses to question 6 of the applicant survey, by domicile

Response	Domicile	Number of responses	Proportion of total responses (%)	Proportion (adjusted for non-response bias) (%)
Yes, I knew what it was	UK	13,240	18.9	18.8
	EU	740	9.2	9.4
	Non-EU	750	9.6	9.8
Yes, I'd heard of it but didn't know what it was	UK	13,130	18.8	18.6
	EU	1,100	13.7	13.7
	Non-EU	1,070	13.8	13.9
No	UK	43,510	62.3	62.6
	EU	6,200	77.1	77.0
	Non-EU	5,940	76.6	76.3
Total	UK	69,880	100	100
	EU	8,050	100	100
	Non-EU	7,760	100	100

Question 7

This question was asked to those applicants who responded with 'Yes, I knew what it was' to question 6.

'Do you know what TEF ratings the universities you applied for have been awarded?'

Table A.3: Responses to question 7 of the applicant survey

Response	Number of responses	Proportion of total responses (%)	Proportion (adjusted for non-response) (%)
Yes, I knew all their ratings	6,110	41.6	42.3
I knew some of their ratings	7,620	51.8	50.9
No, I didn't know any of their ratings	970	6.6	6.8
Total	14,700	100	100

Question 8

This question was asked to those applicants who responded with 'Yes, I knew what it is' to question 6.

'How important were the TEF ratings when deciding which universities to apply for?'

Table A.4: Responses to question 8 of the applicant survey

Response	Number of responses	Proportion of total responses (%)	Proportion (adjusted for non-response) (%)
Extremely important	2,680	18.2	18.8
Important	5,780	39.3	39.0
Slightly important	4,030	27.4	27.2
Not very important	1,500	10.2	10.0
Not at all important	720	4.9	5.0
Total	14,700	100	100

Question 9

This question was asked to those applicants who responded with either 'Yes, I'd heard of it but didn't know what it was', or 'No', to question 6.

'Each university that applied to take part in the Teaching Excellence Framework is awarded one of four statuses (gold, silver, bronze or provisional for small universities) based on a number of factors related to teaching quality, learning environment, and student outcomes. If you had known about the Teaching Excellence Framework prior to applying, how important would you have found the ratings in determining which universities to apply for?'

Table A.5: Responses to question 9 of the applicant survey

Response	Number of responses	Proportion of total responses (%)	Proportion (adjusted for non-response) (%)
Extremely important	10,870	15.7	15.8
Important	30,960	44.6	44.4
Slightly important	19,450	28.0	27.9
Not very important	5,350	7.7	7.8
Not at all important	2,720	3.9	4.0
Total	69,360	100	100

Annex B: Trends in applications to gold, silver, and bronze award providers

Analysis was conducted to determine whether the difference between the observed shares of applications, and those that might be expected given the trends between 2011 and 2017 (prior to publication of the TEF Year Two awards), was statistically significantly different across providers with different TEF awards.

The share of the total sector-wide applications that each provider accounted for was calculated for each year between 2011 and 2018. For each provider, the trend in the share of all applications between 2011 and 2017 was estimated, and used to forecast the share of applications each provider might be expected to account for in 2018. The difference between the predicted and observed shares in 2018 was then calculated for each provider.

Two methods for estimating trends were used, with results of statistical tests (described below) were the same for both. The first method was linear regression, based on data from 2012 to 2017, with the fitted slope used to predict the share of applications in 2018. The second method was double exponential smoothing.

One-way analysis of variance (ANOVA) was conducted, with the dependent variable taken as the difference between expected and observed share of total applicants at each provider in 2018, and the independent variable being the TEF award. Where residuals from the ANOVA were found to be non-normally distributed, an additional Kruskal-Wallis test was performed. Both ANOVA and Kruskal-Wallis tested the null hypothesis that the average difference in observed and expected shares were equal across the TEF awards. All tests were performed at the 5 per cent significance level.

For each group of applications considered (all applications, applications from UK applicants, and applications from non-UK applicants), no statistically significant difference between predicted and observed shares across the TEF awards was found. That is, any differences between the observed share of applications a provider accounted for, and the share expected from recent trends, was not related to (or explained by) the provider's TEF award.