Does the Extended Project Qualification enhance students' GCE A-level performance?

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Abstract

The skills nurtured by, and engendered through, the Extended Project Qualification (EPQ) are clearly stipulated, and have led to its becoming an increasingly popular qualification with all its stakeholders: students, colleges, employers and higher education. Future research is planned regarding the value that the EPQ adds to students' subsequent performances at higher education, but the aim of this brief paper is to describe a statistical analysis of whether, and how much, the EPQ appears to have supplementary effects on students' performance in their GCE A-levels. In other words, are the skills required of the EPQ transferable to more curriculum-embedded qualifications?

Only AQA A-level and EPQ data were used in the analyses, although permission was granted to use students' mean GCSE prior attainment scores. Since two thirds of the national EPQ entry is currently with AQA, the results of the analyses can fairly confidently be considered to be generalisable.

Those results indicate that, after controlling for other available explanatory variables – of which mean GCSE prior attainment score is the most critical – taking the EPQ enhances the odds of achieving a higher grade A-level (A*-B) by 29 per cent. For each incremental grade achieved in the EPQ, the chances of being awarded a higher grade A-level increases by 7 per cent.

However, the effects were not uniform across A-level subject types. In most cases the impact was similar to the above figure, yet for mathematics and languages, there was no effect.

Introduction to the EPQ

Recent years have seen an implicit – and sometime explicit – debate regarding the relative importance of knowledge and skills in the curriculum. Some argue the need to inculcate more key skills in all young people to prepare them for the world of work and higher education they will encounter in the 21st century. These skills refer not only to the functional technical and vocational skills required by students traditionally not adopting the 'academic route'. They are much broader in scope, apply to all learners, and comprise not just 'hard' skills - such as literacy, numeracy, IT and languages - but also 'soft' skills, such as creativity, problem-solving and initiative. These are increasingly considered vital for students' individual success, and for that of society as a whole, and higher education institutions (HEIs) and employers especially have promulgated this view. The issue is well described in recent publications such as Bennett (2014), Didau (2011) and Stobart (2014).

The EPQ was introduced in 2007 – initially as a pilot – as an integral part of the level 3 Diploma qualification as an agent of the wider skills provision. However, it has since proved increasingly popular with students, centres and higher education as a qualification in its own right. AQA's entries have risen from 870 in 2008 to 22,449 in 2014 (67.5% of the national entry).

The popularity of the EPQ among students is reflected in (or reflects) the enthusiasm for it among universities. The sample testimonials from several universities contained in Appendix A illustrates the esteem in which this new qualification is held by them. The following extract is typical.

> From now on, all applicants… for our Humanities courses (excluding Music), and Human Social Sciences courses (excluding Maths) undertaking an EPQ will be made an alternative offer alongside our traditional offer. The alternative offer will be one grade reduced from our traditional offer in exchange for an A in the EPQ. … It is our hope that this will send out a clear message to students that we value the EPQ, and appreciate the hard work that goes into completing one. We also hope that this will serve to encourage more students to undertake the EPQ, reduce the number that drop out once the university offers come in, and also result in more EPQ students applying to us. We have an increasingly compelling evidence base that students who did well at the EPQ settle in well to their undergraduate study at a research intensive university like ours, and so are keen to see more of them in our lecture theatres and seminar rooms.
>
> University of Southampton

In summary, the EPQ works through the following stages:

- students develop an initial idea for a project which they discuss with their supervisor;
- students undertake initial research to develop their ideas sufficiently to produce a formal Project Proposal, which includes the project's aims, initial plans and format of presentation. If the proposal satisfies the assessment criteria of the EPQ, the supervisor and coordinator endorses it;
- students produce their project. The guided learning hours period is 120 hours, of which 30 are devoted to taught skills (e.g. critical evaluation, referencing, presentation and report writing). These are not formally assessed but are necessary for the production of a successful project;
- students also maintain a Production Log, which records details of the following:
  - the planning review meeting between the student and the supervisor following project approval;
  - mid-project review with the supervisor;
  - end-of-project review with the supervisor;
  - summary and evaluation of the project;
  - a record of the presentation;
  - reflection on the complete project process;
- students make an oral Presentation of their project to their Supervisor and a non-specialist audience which, along with the Production Log and the Project Product, is assessed holistically according to four assessment criteria (3 x 10 marks, 1 x 20 marks = 50 marks total);
- the Supervisors' assessments are standardised internally by the Centre Coordinator before submission for external moderation by AQA.

The EPQ is a rarity in AQA's provision as – apart from the Entry Level Functional Skills qualifications, ELCs, FCSEs, Personal & Social Education, and the Level 1 and Level 2 projects, which are less 'high stakes' than EPQ – it is the sole 100% internally assessed qualification. In addition, it is unique in that its judgemental boundaries are A* and E, not A and E as with all other Level 3 qualifications. As the assessment criteria and moderation processes remain stable between years, it is expected that grade boundaries remain stable too, although

AQA reserves the right, on the basis of unjustified overmarking not captured by the moderation procedures, to change them if necessary. Finally, it is a largely skills-based qualification, the context in which the skills are demonstrated being entirely at the student's discretion. Consequently, projects are often supervised and assessed by a range of teachers in a centre across a cohort, reflecting the variation in subject specialisms required to make an informed assessment.

Analysis 1: Preliminary investigation using prediction matrix methodology

At the request of one of our EPQ stakeholders, a preliminary analysis was undertaken using an approach usually employed to provide information on the comparability of standards in cognate subjects. The prior attainment profile (mean KS2 for GCSE students, or mean GCSE scores for A-level students) of one subject's students is substituted into the outcome matrix of the second subject, in order to compare the predicted and actual outcomes (Eason, 2008). For example, the prior attainment A-level Chemistry students might be substituted into the A-level Biology outcome matrix.

For the current purpose, however, the entries for nine major A-levels were divided between those who had/had not also taken the EPQ. The prior attainment profile of the (smaller) former group was substituted into the outcome matrix of the latter group. Table 1 shows that, apart from in mathematics, EPQ students appear to perform better in the A-level subjects than their non-EPQ peers with the same prior attainment. In Biology, for example, 5.62 per cent more EPQ students achieved at grade A [or better], than their non-EPQ peers, even after allowing for differences in prior attainment.

Table 1. Actual – Predicted outcomes of EPQ students in nine of AQA's largest A-level specifications, Summer 2014

Specification	Total	EPQ Entry	EPQ entry as %	A*	A	B	C	D	E
Biology	19539	2019	10.3	3.15	5.62	4.24	2.78	1.53	0.54
Bus Stud	13931	694	5.0	2.09	2.46	3.17	4.10	0.65	0.32
Chemistry	13118	1407	10.7	3.95	4.54	3.30	1.72	0.72	-0.18
Eng Lang B	12534	817	6.5	1.41	5.67	7.08	3.83	1.17	0.17
Eng Lit B	12282	1044	8.5	0.59	3.87	4.17	2.19	0.49	0.13
Geography	13405	1088	8.1	3.81	4.04	3.53	1.61	0.67	-0.04
Mathematics	11643	941	8.1	0.34	-0.03	-0.53	-1.88	0.14	-0.59
Psychology A	26522	1956	7.4	1.78	1.64	1.98	2.79	2.02	0.78
Sociology	18144	997	5.5	0.76	1.86	2.83	0.56	0.26	0.46

While useful, the above approach is fairly crude and interpretations must be made with care as the analysis embodies several implicit assumptions. For example, do the skills developed by the EPQ *per se* contribute to the apparent value-added in A-level performance, or is the EPQ acting as a proxy for a confounding variable; for example do EPQ students tend to be generally more motivated and does this account for their better performance?

Analysis 2: Logistic regression modelling – all subjects combined

Given the results which this simple analysis yielded, together with its limitations, a second more sophisticated approach to investigating this issue was undertaken, again using AQA only data and employing logistic regression analyses. The database for these analyses comprised all 278,358 AQA A-level subject entries taken by 18-year-olds in 2014. As it is the A-level entry – not the student – which is the unit of analysis and focus of interest, a student who took three A-levels would appear in the dataset three times, once for each subject entry. This is because part of the analysis is to investigate whether – as appears to be case from Table 1 - the EPQ has a differential effect on A-level performance in different subject areas.

Tables 2-4 contain the variables available for use in the analyses. Some salient points to note are that 7.5 per cent of the A-level entries were accompanied by an EPQ entry (Table 2), and for all A-level subject types the proportion of students who had concurrently taken an EPQ consistently achieved higher A-level grades (A*-B) (Table 4a).

Table 2: Descriptive statistics of the key variables in the study population

Variables		Frequency	%	Cum%
EPQ binary				
	No EPQ	257507	92.5	92.5
	Yes EPQ	20851	7.5	100.0
	Total	**278358**	**100.0**	
A-level Grade				
	C & below	136577	49.1	49.1
	A*-B	141781	50.9	100.0
	Total	**278358**	**100.0**	
Centre type				
	Comp & Middle	156905	56.4	56.4
	Selective & Indep	43641	15.7	72.0
	FE, 6th FC & Tertiary	74821	26.9	98.9
	Other	2991	1.1	100.0
	Total	**278358**	**100.0**	
Gender				
	Female	164610	59.1	59.1
	Male	113748	40.9	100.0
	Total	**278358**	**100.0**	

Table 3: Summary of Mean GCSE scores (A*=8, A= 7 etc.)

Minimum	1st Quartile	Median	Mean	3rd Quartile	Maximum
1.00	5.67	6.25	6.27	6.90	8.00

Table 4a: A-level grade (%) by EPQ by subject group

Subject group	n	EPQ?	A-level grade (%)		
			C & below	A*-B	Total
Mathematics	14,755	No	40.3%	59.7%	100.0%
		Yes	30.0%	70.0%	100.0%
		Total	39.5%	60.5%	100.0%
English	41,814	No	55.7%	44.3%	100.0%
		Yes	35.7%	64.3%	100.0%
		Total	54.2%	45.8%	100.0%
Languages	8,885	No	31.0%	69.0%	100.0%
		Yes	22.8%	77.2%	100.0%
		Total	30.2%	69.8%	100.0%
Science	45,460	No	44.4%	55.6%	100.0%
		Yes	28.9%	71.1%	100.0%
		Total	42.9%	57.1%	100.0%
Business	21,121	No	52.1%	47.9%	100.0%
		Yes	38.4%	61.6%	100.0%
		Total	51.3%	48.7%	100.0%
Arts	26,468	No	47.6%	52.4%	100.0%
		Yes	33.9%	66.1%	100.0%
		Total	47.0%	53.0%	100.0%
Technologies	9,511	No	62.2%	37.8%	100.0%
		Yes	49.0%	51.0%	100.0%
		Total	61.5%	38.5%	100.0%
Humanities	110,344	No	52.7%	47.3%	100.0%
		Yes	36.1%	63.9%	100.0%
		Total	51.4%	48.6%	100.0%
All	**278,358**	**No**	**50.3%**	**49.7%**	**100.0%**
		Yes	**34.0%**	**66.0%**	**100.0%**
		Total	**49.1%**	**50.9%**	**100.0%**

Table 4b: EPQ grade distribution of the study population

EPQ Grade			
	Frequency	%	Cum%
A*	4063	19.5	19.5
A	5342	25.6	45.1
B	4851	23.3	68.4
C	3502	16.8	85.2
D	1950	9.4	94.5
E	742	3.6	98.1
U	401	1.9	100.0
Total	20851	100.0	

Analysis of factors affecting grades at A-level

To make more sense of the above raw data, especially those in Table 4a, the relationship between A-level grade and potential explanatory variables was explored overall and for separate subject groupings individually. The factors considered included student's mean GCSE score (as proxy for ability level), the number of GCSEs taken, centre type, gender and whether the EPQ was taken concurrently with the A-level.

A logistic regression model was applied to describe the relationship between the explanatory variables and the likelihood of achieving a grade A*-B[1] at A-level. The model is used to obtain estimated measures of association in terms of odds ratios. The results of the model containing all the explanatory variables are presented in Tables 5 through 14. The strength of association is based on p-values, and the association between A-level grade (A*-B) and various factors is interpreted in terms of the odds ratio coefficient of the logistic regression model. In the logistic regression model, the response being modelled is the log(odds) of a student achieving a grade A*-B at A-level. The regression coefficients give the change in log(odds) in the response for a unit change in the explanatory variable, holding all other explanatory variables constant. In the models used there were no evidence of over dispersion (i.e. the residual scaled deviance was approximately equal to the residual degrees of freedom). Thus the specification of model was minimally adequate for our analysis.

Model 1: The overall effect of taking EPQ on A-level grade

Model 1 in Table 5, dichotomises EPQ (did/did not enter for the EPQ) and shows that overall the odds of getting grade A*-B at A-level for students who took EPQ were greater by a factor of 1.29 over those who did not, controlling for other factors. Put another way, the odds of being awarded grade A*-B at A-level increase by 29 per cent (odds ratio = 1.29, p<0.0001) for students who entered for the EPQ, after controlling for mean GCSE score, gender, centre type and the number of GCSEs.

Table 5: Logistic regression model for A-level grade (Model 1)

Variables	estimated coefficient	standard error	Z-value	Odds ratio
Constant	-9.5573	0.0455	-211.86	-
Mean GCSE	1.5267	0.0068	224.41	4.6***
EPQ (yes v no)	0.2534	0.0179	1 4.18	1.29***
Number of GCSEs	-0.0134	0.0025	-5.3	0.99***
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.2746	0.0136	20.13	1.32***
• FE, 6th FC or Tertiary College	0.0036	0.0103	0.35	1
Gender (female v male)	0.1401	0.0091	15.34	1.15***

Significance codes: *** p<0.001, ** p<0.01

[1] The dichotomous A-level grade variable was divided at the B/C interface partly because grade B (or better) is a key A-level grade for progression purposes etc., and partly because that interface divided the grade distribution almost exactly in half.

Model 2: The overall effect of EPQ grade on A-level grade

Model 2 in Table 6, now treats the EPQ grade scale as a continuous variable (0=Not Applicable, 1=U, 2=E, 3=D, 4=C, 5=B, 6=A and 7=A*) and the results show that a unit increase in EPQ grade corresponds with 7 per cent increase in the likelihood of being awarded grade A*-B at A-level (odds ratio= 1.07, p<0.0001) when controlling for mean GCSE score, gender, centre type and the number of GCSEs.

Table 6: Logistic regression model for A-level grade (Model 2)

Variables	estimated coefficient	standard error	Z-value	Odds ratio
Constant	-9.5165	0.0447	-212.87	-
Mean GCSE	1.5201	0.0068	223.06	4.6***
EPQ grade	0.0709	0.0036	19.8	1.07***
Number of GCSEs	-0.01389	0.0025	-5.48	0.99***
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.2748	0.0136	20.14	1.32***
• FE, 6th FC or Tertiary College	0.0008	0.0103	0.08	1
Gender (female v male)	0.1385	0.0091	15.19	1.15***

Significance codes: *** p<0.001, ** p<0.01

Analysis 3: Logistic regression modelling – separate subject groupings

In order to investigate if the factors affecting A-level grade differ by subject type, two types of analyses were run.

First, Table 7, Model 3 contains the result of a model simultaneously containing the eight subject groups described in Table 4a - with Mathematics used as the reference category for the purposes of subject group comparison - and also controlling for the factors mentioned in Tables 5 and 6.

Once again, it can be seen that the overall effect of taking EPQ on A-level grade is large (odds ratio= 1.32, p<0.0001). The coefficients for the separate subject groups can be interpreted as how much the effect in each subject different from that of the baseline (Mathematics) after other factors – including the overall EPQ effect – have been controlled for. Thus, for example, the odds of an English student scoring a high A-level grade are 16 per cent higher than those of an equivalent mathematics student (odds ratio= 1.16, p<0.0001). By contrast, the odds of a Science student scoring a high A-level grade are 49 per cent lower than those of an equivalent mathematics student (odds ratio= 0.51, p<0.0001).

Table 7: Logistic regression model for A-level grade (Model 3)

Variables	estimated coefficient	standard error	Z-value	Odds ratio
Constant	-10.7987	0.0549	-214.11	-
Mean GCSE	1.7235	0.0076	226.27	5.6***
EPQ (yes v no)	0.2771	0.0181	15.31	1.32***
Number of GCSEs	-0.0111	0.0026	-4.3	0.99***
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.2481	0.0139	17.85	1.28***
• FE, 6th FC or Tertiary College	-0.0316	0.0106	-3	0.97**
Gender (female)	0.017	0.0096	1.77	1.02
Subject grouping				
• Mathematics was used as the baseline category for comparison				
• English	0.1489	0.0237	6.3	1.16***
• Languages	0.0292	0.0347	0.84	1.03
• Science	-0.6823	0.023	-29.67	0.51***
• Business	0.2877	0.0261	11.04	1.33***
• Arts	0.8517	0.0256	33.29	2.34***
• Technologies	-0.0343	0.0321	1.07	0.97
• Humanities	0.148	0.0216	6.85	1.16*

Significance codes: *** p<0.0001, ** P<0.01, * P<0.1

Analysis of the factors affecting A-level grade by subject group: Models 4 - 10

Finally, separate analyses were run for the eight subject groups in turn (Mathematics, English, Languages, Science, Business, Arts and Humanities), controlling for the factors mentioned in Tables 5 and 6. The results of these models are contained in Tables 8 to 14. NB A model could not be fitted for Technologies, probably due to one of the explanatory factors being constant, i.e. not changing over levels.

The most interesting feature of these tables is that while the effect of the EPQ appears to be fairly similar for most subject groups (i.e. as for all subjects combined) there is no (or negligible) effect on the mathematics (Table 8) and languages (Table 10) A-level grades. Whether this is due to the skills developed by the EPQ not being transferable to those subject groups, or another reason will be the subject of further, probably qualitative, investigation. In any case, and returning to a point made earlier, this surprising finding seems to give the lie to the suggestion that the apparent EPQ effect is merely a proxy for, say, greater general motivation demonstrated by EPQ centres and students. Were that to be the case, why are mathematics and languages exempt?

Table 8: Mathematics subjects: Model 4

Variables	estimated coefficient	standard error	Z-value	Odds ratio
Constant	-10.4837	0.2197	-47.72	-
Mean GCSE	1.6912	0.0326	51.81	5.4***
EPQ (yes v no)	0.0047	0.0767	0.06	1
Number of GCSEs	0.0052	0.0117	0.46	1
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.0532	0.0991	0.54	1.05
• FE, 6th FC or Tertiary College	-0.0684	0.0403	-1.7	0.93
Gender (female v male)	-0.523	0.0419	-12.47	0.59***

Significance codes: *** p<0.001, ** p<0.01 sample size = 14,755

Table 9: English subjects: Model 5

Variables	estimated coefficient	standard error	Z-value	Odds ratio
Constant	-13.779	0.1453	-94.81	-
Mean GCSE	2.1344	0.0225	94.81	8.45***
EPQ (yes v no)	0.4068	0.0492	8.27	1.50***
Number of GCSEs	0.059	0.0074	7.97	1.06***
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.3543	0.0478	7.41	1.40***
• FE, 6th FC or Tertiary College	-0.0697	0.0287	-2.43	0.93
Gender (female v male)	0.024	0.0283	0.85	1.02

Significance codes: *** p<0.001, ** p<0.01, sample size = 41,814

Table 10: Languages subjects: Model 6

Variables	estimated coefficient	standard error	Z-value	Odds ratio
constant	-7.3737	0.2495	-29.55	-
Mean GCSE	1.3517	0.0377	35.81	3.86***
EPQ (yes v no)	0.0754	0.0949	8.27	1.08
Number of GCSEs	-0.0912	0.014	-6.51	0.91***
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.2848	0.0671	4.24	1.33***
• FE, 6th FC or Tertiary College	-0.0557	0.074	-0.75	0.94
Gender (female v male)	-0.302	0.0581	-5.2	0.79***

Significance codes: *** p<0.001, ** p<0.01; sample size = 8,885

Table 11: Science subjects: Model 7

Variables	estimated coefficient	standard error	Z-value	Odds ratio
constant	-16.0306	0.1697	-94.46	-
Mean GCSE	2.4227	0.0241	100.45	1.13**
EPQ (yes v no)	0.3242	0.0431	7.52	1.38***
Number of GCSEs	-0.0035	0.0068	-0.51	1
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.1967	0.0316	6.22	1.22***
• FE, 6th FC or Tertiary College	0.0048	0.0307	0.16	1
Gender (female v male)	-0.6188	0.0249	24.82	0.54***

Significance codes: *** p<0.001, ** p<0.01; sample size = 45,460

Table 12: Business subjects: Model 8

Variables	estimated coefficient	standard error	Z-value	Odds ratio
Constant	-10.8129	0.1811	-59.71	-
Mean GCSE	1.8153	0.0286	63.5	6.14***
EPQ (yes v no)	0.27211	0.0738	3.69	1.31***
Number of GCSEs	-0.01845	0.0091	-2.03	0.98*
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.1444	0.044	3.28	1.15**
• FE, 6th FC or Tertiary College	-0.2379	0.0389	-8.05	0.79***
Gender (female v male)	-0.2771	0.0344	-8.05	0.76***

Significance codes: *** p<0.001, ** p<0.01, *p<0.05; sample size = 21,121

Table 13: Arts subjects: Model 9

Variables	estimated coefficient	standard error	Z-value	Odds ratio
Constant	-8.0597	0.1291	-62.43	-
Mean GCSE	1.304	0.0212	61.55	3.68***
EPQ (yes v no)	0.2942	0.0716	4.11	1.34***
Number of GCSEs	0.0036	0.0077	0.46	1
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.3541	0.044	8.04	1.42***
• FE, 6th FC or Tertiary College	0.0731	0.0312	2.34	1.08*
Gender (female v male)	0.591	0.0306	19.32	1.81***

Significance codes: *** p<0.001, ** p<0.01, *p<0.05; sample size = 26,468

Table 14: Humanities subjects: Model 10

Variables	estimated coefficient	standard error	Z-value	Odds ratio
Constant	-9.5969	0.0721	-133.11	-
Mean GCSE	1.5452	0.0113	136.62	4.69***
EPQ (yes v no)	0.2849	0.0277	10.3	1.33***
Number of GCSEs	-0.0218	0.004	-5.4	0.98***
Centre type				
• Comp or Middle was used as the baseline for comparison				
• Selective or Independent	0.2313	0.0223	10.38	1.26***
• FE, 6th FC or Tertiary College	0.0086	0.016	0.54	1
Gender (female v male)	0.2112	0.0149	14.21	1.24***

Significance codes: *** p<0.001, ** p<0.01, *p<0.05; sample size = 110,344

Discussion

This paper contains the results of the first analyses investigating the wider effects of undertaking the Extended Project Qualification (EPQ), in this case, whether – and by how much – concurrent A-level grades appear to be enhanced by taking the EPQ. The effects are usually substantial but are not consistent across subject groups. The prime focus of these analyses has been the effect of the EPQ although the effects of other variables, especially that of gender, are worth noting, especially the extent to which they vary between subject grouping.

As well as refining the focus of these analyses, future analyses will focus on its impact on students' subsequent performance at university, and also whether, due to it's not being a curriculum-embedded qualification, the EPQ is more socially equitable, being less dependent on centre and teacher effects. Suggestions for improvements and refinements, both to the current and potential future analyses, would be welcomed.

Three methodological issues to be considered in future analyses are as follows. First, it was noted earlier that, since the unit of analysis was A-level entry, an individual student could be represented multiple times, dependent on the number of his/her entries. This raises a methodological issue as, strictly speaking, the A-level grade observations are not independent of each other (an assumption of the logistic regression method) but are nested within student, and students are nested within centres. This hierarchy in the structure of the data should, therefore, be modelled via multilevel logistic regression, for ignoring this aspect risks underestimating the standard errors of measurement of the model.

Second, for Model 2 the alphabetic EPQ grades were converted into a numeric scale and treated as a continuous variable. Although this is regularly done in assessment research (e.g. in the calculation of the prior attainment mean GCSE score), strictly speaking the variable should be treated as a categorical or ordinal, although doing so would complicate the analysis.

Third, these analyses highlight the distinction between statistical and substantive significance. By using all the AQA data available, the numbers of cases – even for EPQ students – was large and this sometimes yielded statistically significant effects of limited substantive significance. The 'Number of GCSEs' effect in Table 14 above is such an example. Nevertheless, wherever the EPQ variable was statistically significant, it was large enough to be of substantive interest.

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Appendix A. Sample of testimonials from universities for the EPQ

The University welcomes applications from students who have taken the Extended Project Qualification (EPQ). We see this as positive evidence of motivation to explore a subject in greater depth, as well as an opportunity for further development of analytical, critical thinking and independent research skills. If your results fall short of the offer level by a small margin, for example one A-level grade, your Extended Project result will be taken into account by the academic admissions selector.

University of Essex

From now on, all applicants (including those in the current 2012-13 cycle) for our Humanities courses (excluding Music), and Human and Social Sciences courses (excluding Maths) undertaking an EPQ will be made an alternative offer alongside our traditional offer. The alternative offer will be one grade reduced from our traditional offer in exchange for an A in the EPQ. For example, History, whose traditional offer is AAB will make an alternative offer of ABBa. It is our hope that this will send out a clear message to students that we value the EPQ, and appreciate the hard work that goes into completing one. We also hope that this will serve to encourage more students to undertake the EPQ, reduce the number that drop out once university offers come in, and also result in more EPQ students applying to us. We have an increasingly compelling evidence base that students who did well at the EPQ settle in well to their undergraduate study at a research intensive university like ours, and so are keen to see more of them in our lecture theatres and seminar rooms.

University of Southampton

Qualifications taken in addition to your main exams, such as the Extended Project, will improve your application by enabling you to develop study skills that will be useful in higher education. Although we do not usually make offers based on such qualifications, we encourage applicants to take them and to note them on their application form.

University of Birmingham

The University is supportive of the requirement to undertake an Extended Project ... It is expected that some admissions tutors may make two alternative offers to those offering this qualification, one of which involves success in the Extended Project (e.g. either AAA at A-level or AAB at A-level plus Extended Project).

University of Bristol

We welcome the introduction of the Extended Project and would encourage you to undertake one as it will help you develop independent study and research skills and ease the transition from school/ college to higher education. Completion of an Extended Project will not, however, be a requirement of any offer made.

University of Cambridge