

The European Baccalaureate

A Study of the Performance of European Baccalaureate students in Higher Education in the UK and Ireland

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Introduction

The European Baccalaureate (EB) is the school-leaving examination for students who attend the European Schools. There are 13 European Schools situated mainly in Belgium (4), Luxembourg (2), and Germany (3), but also in Italy, Spain, the Netherlands and the UK. The European Schools were established for the education of children whose parents work in European Union Institutions. Although the schools are open to the whole ability range, children can fail a year and have to repeat it. If they fail the same year twice, they have to leave the European School system and be educated elsewhere. Partly as a result of this and also because of the social background of the parents, the European Schools secondary schools are more like English grammar schools, French lycées classiques or German Gymnasium in terms of the ability range of the students². European School students go on to university all over Europe (and beyond). The European Schools are governed by representatives from all member countries of the European Union and the curriculum and European Baccalaureate examinations are approved and supervised by a team of inspectors drawn from all the EU member states. The EB is recognised as a university entrance qualification in all EU states.

The EB is a demanding examination. Students are required to study their own language, at least one foreign language, history and geography in that foreign language, mathematics, at least one science subject, philosophy, physical education and religion/ethics. They must add elective courses to this, for example more sciences, more languages or more mathematics. A student has to be able to perform reasonably well across a wide range of academic subjects to obtain a good overall score in the EB examination. The pass mark is 60, and in theory scores can range up to 100. In practice only 0.2% of students scored over 95 in 2005, and the mean mark has been around 76 for the last 5 years. In the same period the proportion of students scoring 80 or more varied between 27% and 33%³. A more detailed account of the European Baccalaureate and of the European school system can be found at <http://www.ucas.ac.uk/candq/inter/misc/appendb.html> and of course on the official European School website www.eurisc.org.

The purpose of the present study was to compare A-level grades and EB results, with a view to informing the selection process at British universities. Over 2000 ex-pupils from the European School system were contacted by email and asked to participate in the

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² The 2003 PISA study showed that English-speaking children in the European School of Luxembourg outperformed children in the Luxembourg lycées classiques (educating the top 37% of the ability range). See http://www.script.lu/documentation/publication_pisa_2003.phtml for more details.

³ Report on the European Baccalaureate 2005 by Mr. Schomaker, Ref:2005-D-3110-en-2, published by the Central Council of the European Schools for internal distribution.

study. The email addresses were taken from a database that was set up in February 2002, in anticipation of the 50th anniversary of the founding of the first European School, to allow ex-pupils to contact one another. The respondents could thus have left school (and entered university) between 3 and 47 years ago, although the vast majority (87%) had left since 1990. Because European School (ES) students go to universities in many different countries, we knew that many of the people contacted would not have attended universities in Britain or Ireland and so would not be eligible to participate in this study. After six weeks, 352 valid responses had been obtained along with 150 invalid responses⁴.

Respondents were asked to indicate their gender, average mark in the EB examination, and the class of degree they obtained. In British and Irish universities, honours degrees are divided into 4 classes, called (for historical reasons) first (1), upper second (2.1), lower second (2.2) and third (3) class. We did not collect any information on ordinary degrees or on drop-out rates.

Results

Table 1 shows the EB scores for our respondents, compared to those for two complete cohorts (2000 and 2005) of ES pupils. In 2005, 1.9 % of pupils scored less than 60 in the EB (i.e. did not receive their diploma), and in 2000 the failure rate was 3.6 %. For comparative purposes the figures in Table 1 have been rescaled to remove these failing candidates. It is clear from the table that good students were over-represented among the survey

Table 1: *European Baccalaureate scores for two cohorts of EB students and the survey respondents*

EB Score ⁵	Percentage in each band			Cumulative percentages		
	2000 cohort %	2005 cohort %	Survey %	2000 cohort %	2005 cohort %	Survey %
over 95.00	0.1	0.2	0.0	99.9	100	100.0
90 - 94.99	2.3	4.9	6.0	99.8	99.8	100.0
85 - 89.99	8.9	11.4	17.9	97.5	94.9	94.0
80 - 84.99	16.9	15.6	15.1	88.6	83.5	76.1
75 - 79.99	19.1	20.8	27.0	71.7	47.9	61.0
70 - 74.99	20.7	20.9	17.6	52.6	47.1	34.0
65 - 69.99	18.6	16.3	11.6	31.8	26.2	15.4
60 - 64.99	13.2	9.9	4.8	13.2	9.9	4.8
<i>N</i>	<i>n/a</i>	1147	352	<i>n/a</i>	1147	352
Average score	74.1	76.0	77.7	74.1	76.0	77.7

⁴ Incomplete responses, responses from ex-pupils who went to universities outside the UK, who had not yet graduated, and from those who went to an institution that is not classified as a university.

⁵ EB scores are a weighted average of marks in each individual subject. They are calculated as a percentage to two decimal places. The tables for 2000 and 2005 reflect this. In our survey, we asked for EB average as a whole number, so the boundaries in the table are slightly different.

respondents, while weaker students were under-represented. This is hardly surprising, given that lower achieving pupils are less likely to have been offered university places, and so will not have been eligible to be included in our study.

Table 2 shows that, overall, ES students achieved very well at British and Irish universities. Overall, 27% of them gained first class degrees, and 51% upper seconds, giving a total of 78% receiving “good degrees”. There was a clear relationship between EB score and class of degree, with over 35% of students with EB scores over 80 going on to get first class degrees, compared to less than 20% of those with EB scores below 70. The corresponding figures for good degrees were over 86% and 64%.

Table 2: The percentage of respondents gaining each class of degree, by EB score

EB score	Percentage of candidates gaining					N
	First	2.1	2.2	Third	Good degrees	
90-95	48	48	5	0	95	21
85-89	30	54	16	0	84	63
80-84	36	49	15	0	85	53
75-79	21	55	21	3	76	95
70-74	24	52	21	3	76	62
65-69	17	49	34	0	66	41
60-64	24	35	41	6	59	17
All	27	51	20	2	78	352
N	94	180	72	6	274	352

The university performance of EB students is compared with that of A-level students in Table 3. Naylor and Smith⁶ (2002) studied the degree performance of British undergraduates who left university in 1992/1993 and compared their degree results with the total A-level point score for their best three A-levels⁷. Their results are reproduced in Table 3, where first class and upper seconds are grouped together and called “good degrees”.

A substantial proportion of A-level students (13.2%) achieved the top possible A-level score of 30 points. This suggests that there is a ‘ceiling’ to A-level results, in a way that is not true for the EB. However the results for A-level and EB students are similar, in that there is a clear relationship between school leaving grades and getting a good degree at

⁶ ‘Schooling Effects on Subsequent University Performance: Evidence for the UK University Population’ by Robin Naylor and Jeremy Smith published in *Economics of Education Review*, 24, 549-562 (2005)

⁷ In 1989/1990 it was usual for candidates in England and Wales to take just three A-levels. The A-level point score is worked out by awarding points 10 points for an A grade, 8 for a B, 6 for a C, 4 for a D and 2 for an E. Thus the best possible score is 30 points. Theoretically, the minimum university entrance qualification is 2 E grades, a total of 4 points. UCAS has recently changed its method of calculating points. See <http://www.ucas.com/candq/tariff/index.html#tables> for more details.

university. Some 84% of students with 30 A-level points got a good degree, compared to less than 40% of those with fewer than 18 A-level points (equivalent to three Cs).

Table 3: *The percentage of graduates with good degrees, by A-level score*

A-level score (points)	Percentage of 1992/93 university cohort gaining A-level point score		Percentage with good degrees		
	Percentage of cohort	Cumulative percentage	Males	Female	All (estimated) ⁸
30	13.2	99.9	82.9	85.7	84.3
26-29	22.7	86.7	67.5	77.4	72.5
22-25	25.8	64.0	54.4	66.4	60.4
18-21	21.1	38.2	43.7	57.7	50.7
14-17	11.3	17.1	36.8	45.0	40.9
Below 14	5.8	5.8	28.1	36.1	32.1
<i>N</i>	<i>42281</i>	<i>42281</i>			

⁸ Naylor and Smith show the data separately for males and females. We have averaged the percentages for males and females to get the overall percentage given in Table 3.

Table 4: A comparison of university results of students with EB and A-level qualifications

A-Level results		EB results	
A-level (points)	score % with good degrees	EB score	% with good degrees
30	83.8	90-95	95
		85-89	84
		80-84	85
26-29	72.5	75-79	76
		70-74	76
22-25	60.4	65-69	66
		60-64	59
18-21	50.7		
14-17	40.9		
Below 14	32.1		

The results for A-levels and the EB are compared in Table 4. This shows that, in terms of the probability of getting a good degree at university, an EB score of 80 or more is roughly equivalent to 30 A-level points (3 A grades). An EB score of 70 to 79 is equivalent to an A-level score of 26-29 (ABB to AAB) and an EB score of 65 to 69 is equivalent to 22-25 A-level points (BBC, BBB). Even students with a bare pass at the EB (60-64) are more likely to get a good degree at university than students who achieved 18-22 points (CBB, CCB, CCC) at A-level. While we have no information on students who did not pass their EB, Table 4 suggests that, given the chance, a fair proportion of them might also be capable of doing well at university.

Discussion

This research was motivated by concern over the unrealistic offers that some ES students have been receiving from UK and Irish universities in recent years. The situation seems to have become even more serious since the foundation of UK NARIC, the National Recognition Information Centre for the United Kingdom. NARIC describes itself (www.naric.org.uk) as 'the only official source of information and advice on international education and training systems and overseas skills and qualifications' and claims to have two key functions, one of which is 'To provide recognition service and comparability information of all international qualifications from 183 countries worldwide with those in the UK'.

Unfortunately, NARIC seems to be working on false assumptions, the main one being that 'the overall level of the qualifications is comparable' so that 'a fail grade at any level in any country will always be comparable to a fail grade at the same qualification level in another country'⁹. This assumption leads NARIC to equate an EB score of 60 to 2 E grades (a score of 4) at A level. Other EB scores are then equated to A levels on the basis of the percentage of entrants achieving those scores. The exact grade comparisons that NARIC uses are not freely available (although they can be accessed on payment of an £800 fee¹⁰). However the main problem seems to be that the basic equivalence between an EB pass and 2 E grades. As Table 4 shows, in terms of university performance, an EB score of 60 is more nearly equivalent to an A level score of 22 (BBC). We suggest that this would be more realistic comparison for universities to use when considering applicants from the European Schools, and that the offers they make to students should be adjusted accordingly.

The situation for Irish students is also bad. Irish universities appear work on the same premise as NARIC: that the academic range of students gaining the EB is the same as that of students gaining the Leaving Certificate. Some courses, especially the competitive ones such as medicine, architecture and law, appear to be nearly impossible for EB students to access.

Conclusion

Our results suggest that the EB qualification is at a considerably higher level than 2 E grades at A-level. EB students are disadvantaged by the present system of equivalences. This is something that should be brought to the attention of NARIC and the admissions officers of individual universities as soon as possible, so as to avoid any long-term harm to the prospects of ES students wishing to enrol in British and Irish universities.

It is also important that any grade comparison between EB and A-levels be clear and transparent. A grade comparison table should be agreed with UCAS and published on the UCAS web-site. This is particularly important given the implementation of the new UCAS tariffs for A-levels and other qualifications. The Central Admissions Office (CAO) in Ireland should make appropriate grade comparisons between EB and Leaving Certificate candidates taking into account the high standard of the EB examinations as demonstrated in this paper.

⁹ Letter from Nicholas Everett, Chief Editor, Information Services UK NARIC to Anthony Swallow, teacher at Brussels II European School, 5 December 2005.

¹⁰ See <http://www.naric.org.uk/index.asp?page=123§ion=3>

Since we first published this paper in April 2006, there have been significant developments. Firstly, two independent reports on the EB have been published. These are *Analysis of the Academic and Professional Careers of the European School Graduates*, by van Dijk Management Consultants, commissioned by the European Parliament¹¹, and *External Evaluation of the European Baccalaureate* by the University of Cambridge International Examinations organisation¹². The first report details a survey of the future careers of European School students and considers the European situation in general, so is not particularly germane to our study. The second report, which was commissioned by the Board of Governors of the European Schools, makes a much more systematic analysis of the EB, comparing the syllabuses and levels of competence in the EB and national systems. It seems to broadly agree with our conclusions about the academic level of the EB and is critical of the role played by NARIC. It is worth quoting some of their comments and conclusions in full:

NARIC equivalences

Through contact with NARIC staff we understand that detailed studies of equivalence were previously drawn up by NARIC. These are, however, no longer available publicly, and apparently cannot be accessed by NARIC staff themselves. We could not identify or talk to any member of staff who could give any information or insight into the detail of the report. We were thus not able to scrutinise the methodology or findings. However, the NARIC equivalences are treated seriously by stakeholders across the system. Kelly and Kelly include the detail of a response from NARIC on European Baccalaureate equivalences which is critical evidence.

Appraisal and validation

In line with Kelly and Kelly's analysis, we can establish no empirical basis for the NARIC assumption that 'a fail grade at any level in any country will always be comparable to a fail grade at the same qualification level in another country' (letter from Nicholas Everett, Chief Editor, Information Services UK NARIC to Anthony Swallow, teacher at Brussels II European School, 5 December 2005, quoted in Kelly and Kelly). This would only be true if the populations entered for the qualifications bore strict comparison in terms of attainment profile. There currently is no metric in order to establish a linkage between the populations taking the different qualifications which NARIC links in this statement, which is a key assumption in this statement.

The NARIC assumption is both troubling and damaging. The PISA Luxembourg study, the 2008 Commission study, and Kelly and Kelly suggest that there is adequate empirical evidence which causes serious doubt to be raised regarding the specific assumptions and precise equivalences which NARIC asserts, but neither of these give adequate data for robust re-scaling, in order to replace

¹¹ This report can be downloaded from <http://www.europarl.europa.eu/activities/committees/studies/download.do?file=22931> or www.yourschool.net/survey/academic_careers.pdf

¹² Available from http://www.euroschool.lu/luxschool/bac_info/baccalaureat.pdf or www.yourschool.net/survey/cambridge_report.pdf

the NARIC assumption with an empirically-grounded alternative. This would only be yielded by the adoption of a reference/anchoring instrument of the kind outlined below. Such an instrument would in the first administration give a fix on the range of attainment in the European Baccalaureate population, and would take two years to yield the first evidence and linking data regarding the relationship between European Baccalaureate schools and national systems - and in particular, in terms of UK NARIC's key concerns, with A levels within the English system. This is a very serious matter and the evaluation team believe that NARIC should be explicitly challenged by European Baccalaureate governance to make public the totality of its evidence in support of the assumptions which the organisation has made in respect of its equivalence and tariff statements. (Pages 44 and 45)

It seems, therefore, that NARIC has withdrawn its (in our opinion) grossly unfair table of equivalences. However, we still await an official table of equivalences, agreed between UK NARIC and the European Schools. In October 2006, the career teachers from the European Schools met representatives of UCAS and UK NARIC in Brussels. We had hoped to be invited to this meeting with a view to starting a dialogue with UK NARIC, aiming to establish an appropriate and recognised system of equivalences between the EB and A-levels and were prepared to travel to this meeting at our own expense. The DfES turned down our request. Since then, the situation seems to have returned to the status quo ante. UK NARIC seems to have ruled itself out of the picture leaving individual universities; departments and tutors make their own decisions. While this is much preferable to having a disadvantageous (to EB students) official table of equivalences, we have to agree with the authors of the Cambridge paper that UK NARIC should be further challenged about the basis of their past assumptions. We would hope that they might be able to come up with a more robust and appropriate system, so that an EB student is accepted or rejected into Higher education according to an agreed, objective, standard of equivalences between the EB and A levels

The Irish situation has changed dramatically. Irish parents waged a very successful campaign to have the EB appropriately recognized. EB students are now treated on a par with (Irish) Leaving Certificate (LC) candidates at Trinity College, Dublin: just as with the LC the six best (honours definition) subjects are taken into account. At all other Irish Universities the situation is slightly more nuanced. They still refuse to mark on the basis of the 6 best subjects, taking the overall score on the EB instead. The effect of this obviously depends on the distribution of marks within the EB certificate. However, they now recognise that the EB first foreign language (L2) is equivalent to an LC honours subject. Irish parents feel that their campaign has been totally vindicated and that EB students are no longer at an unfair disadvantage when applying to Irish Universities.