

RESEARCH SUMMARY

International Baccalaureate students studying at UK higher education institutions: How do they perform in comparison with A level students?



Summary developed by the IB Research department based on a report prepared by

Higher Education Statistics Agency (HESA)

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Background

The aim of this study was to compare students who enter higher education in the United Kingdom (UK) with either a qualification awarded by the International Baccalaureate (IB) or a more typical A level or Advanced Highers qualification (referred to collectively in this report as “A level”). This study examined the university enrollment and achievement of matched cohorts of IB Diploma Programme (DP) and A level students. Specifically, the study investigated: enrollment at top 20 UK higher education institutions (HEIs); enrollment in science, technology, engineering and mathematics (STEM) subject courses; continuation from the first to second year of university study; achievement of a first- or second-class honours degree; and activity six months after completion of higher education.

Research design

The report combines data sourced from both the IB and the Higher Education Statistics Agency (HESA). The IB maintains an information system (IBIS) that contains details about students around the world who have taken at least one IB examination. HESA collects information about the academic careers of students prior to their university enrollment, student achievement at university and student destinations after leaving university.

The IB students included in the analyses were those with an IB diploma or at least one IB course qualification. The A level students were defined as students whose highest qualification on entry was at least three A levels, double A levels (counted as two qualifications) or Advanced Highers with grades A–E.

The first section of the full report provides an overview and descriptive statistics of the IB cohorts, shown alongside the equivalent A level cohorts, from the

2012–2013 academic year. For this section, HESA identified in their system a total of 48,740 IB students and 1,200,930 A level students enrolled full-time for a first degree in HEIs in the UK between 2007 and 2013. The second section examines the impact of IB participation on student university enrollment and outcomes. The researchers employed propensity score matching¹ to create equivalent samples of IB diploma and A level students, from across the academic years 2007–2008 to 2012–2013, that could be compared on several university outcomes. In addition, logistic regression analyses, conducted on propensity score matched samples, allowed the researchers to investigate the causal relationship between previous enrollment in the IB and university outcomes.

Findings

Researchers conducted analyses based on three different groups of students.

- **The “student” cohorts:** The matched samples included IB diploma students and A level students (N=11,055 each) enrolled full-time, for a first degree, in the first year of study at an HEI in the UK.
- **The “qualifier” cohorts:** The matched samples included IB diploma and A level students (N=6,455 each) who had successfully completed a full-time first degree at a UK HEI.
- **The “leaver” cohorts:** The matched samples included IB diploma and A level students (N=5,295 each) who had successfully completed a full-time first degree at a UK HEI and had completed the HESA “Destinations of Leavers from Higher Education” (DLHE) survey six months later.

¹ Propensity score matching allowed the researchers to select a group of A level students that had similar demographic characteristics (income level, ethnicity, gender, etc.) to the group of IB students. The aim of creating similar comparison groups is to prevent student background characteristics from biasing the overall result of the study.

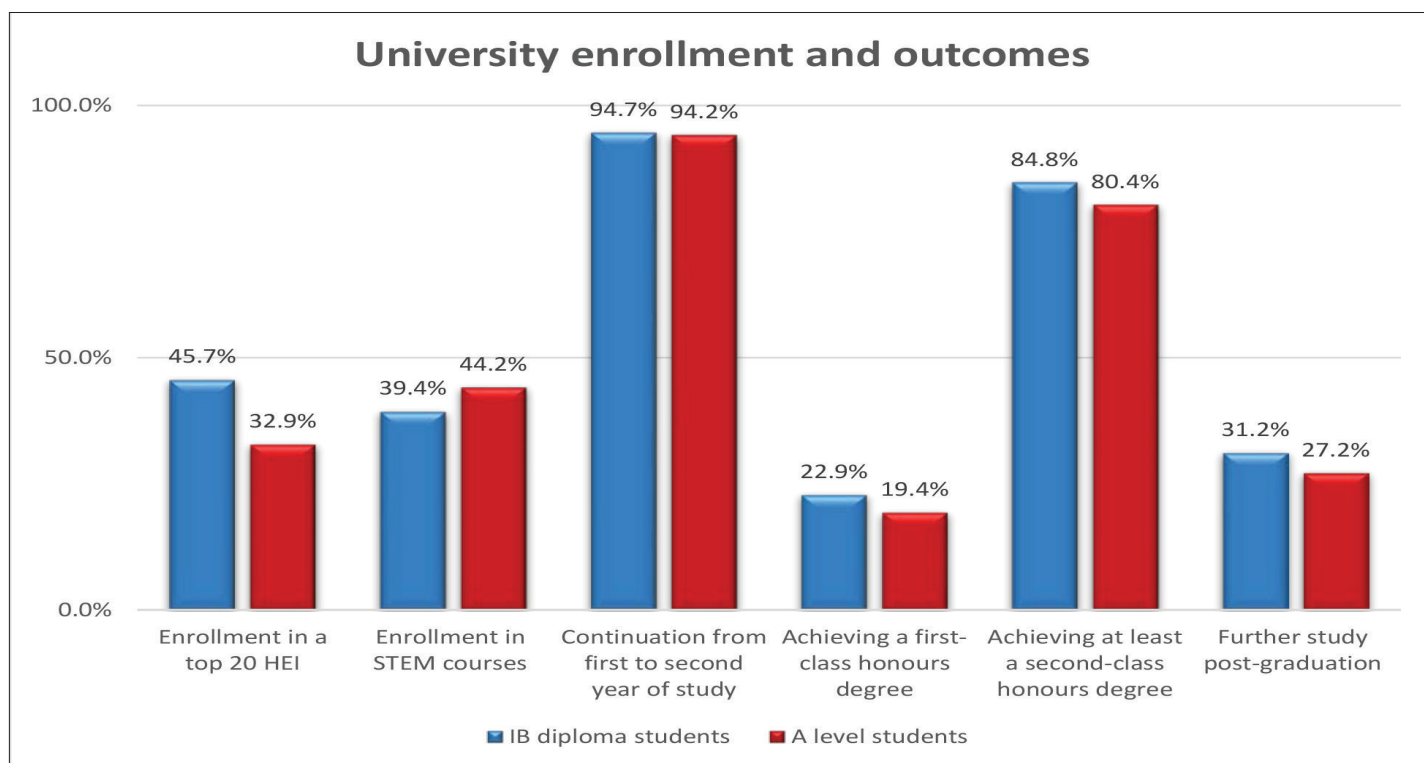


Figure 1. University enrollment and outcomes for IB diploma and A level students

Characteristics of IB and A level student cohorts

This study draws only on data from first-year students enrolled full-time in a first degree at a UK HEI. The following bullet points summarise findings for the 2012–2013 IB and A level student cohorts.

- Demographic characteristics:** About a third (36.6%) of IB students had their domicile in the UK compared to 95.1% of A level students. After the UK, the next largest proportion of IB students had a domicile in the European Union (29.9%) or Asia (16.5%). From among those students with a domicile in the UK², the majority of IB (76.6%) and A level (79.5%) students were white. IB students were more likely to come from a higher socio-economic background (80.5%) than A level students (71.4%). A higher proportion of IB students (36.1%) had previously attended a privately funded school compared to 13.8% of A level students.
- Subjects of study:** The most popular university subjects for IB diploma students were social studies (14.8%) and business and administrative studies (14.6%); for A level students, biological sciences (11.9%) and social studies (10.5%) were the most popular.

The impact of IB participation on university enrollment and outcomes

Enrollment in a top 20 HEI

Results show that, among full-time first-year students enrolled at HEIs in the UK, previous enrollment in the DP significantly increases students' likelihood of attending a top 20 HEI (by 57%) after controlling for differences in academic ability. In the matched samples, 45.7% of the IB diploma students attended a top 20 HEI compared to 32.9% of the A level students (figure 1).

Enrollment in a STEM course in higher education

The IB diploma students were less likely to enroll in a STEM subject during their first year of study compared with A level students. In the matched samples, 39.4% of IB diploma students enrolled in a STEM subject compared to 44.2% of A level students (figure 1).

Continuation from first to second year of university study

Both groups of students had similarly high university continuation rates from the first to second year of university study, with no significant differences when controlling for academic ability (94.7% of IB diploma and 94.2% of A level students—see figure 1).

² Ethnicity/race and socio-economic status data are routinely collected only for students with a domicile in the UK.

University academic achievement: Achieving a first- or second-class honours degree

Among the students who had successfully completed a full-time first degree at an HEI, IB diploma students had a significantly greater likelihood of earning a first-class honours degree than did A level students (22.9% versus 19.4% respectively—see figure 1), after controlling for academic ability. As to be expected, academic ability was significantly associated with achieving a first-class honours degree; in general, all students with a mid- or higher-level pre-university qualification were more likely to achieve a first-class honours degree than were those with a lower graded qualification.

IB diploma students were also significantly more likely to achieve at least a second-class honours degree than were A level students (84.8% versus 80.4% respectively—see figure 1). Again, academic ability was associated with achieving at least a second-class honours degree.

Post-graduation destinations

Among students who had successfully completed a full-time first degree at a UK HEI and had completed the HESA Destinations of Leavers from Higher Education (DLHE) survey six months later, IB diploma students were significantly more likely to be engaged in further study after leaving higher education (figure 1) while A level students were significantly more likely to join the workforce after finishing their university studies.

Among students working after higher education, by industry type, IB diploma graduates were more likely to be employed in professional, scientific and technical activities (18.3%) or human health and social work activities (14.6%). A level graduates were more likely to be employed in wholesale and retail trade, repair of motor vehicles and motorcycles (15.6%) or human health and social work activities (14.5%).

Summary

Overall, IB diploma students compare favourably with A level students at HEIs in the UK. Results based on advanced analysis (i.e., propensity score matching) showed that IB diploma students were significantly more likely than their A level peers to attend a top 20 HEI. Additionally, IB diploma students had a significantly greater likelihood of earning a first-class honours degree than did A level students. A level students, however, were more likely than IB diploma students to take a STEM course during their first year of higher education. First to second year continuation rates were similarly high for both IB diploma and A level students. Lastly, IB diploma students were significantly more likely to be engaged in further study after university graduation, while A level students were significantly more likely to join the workforce, without further study.

This summary was developed by the IB Research department. A copy of the full report is available at ibo.org/en/about-the-ib/research/. For more information on this study or other IB research, please email research@ibo.org.

To cite the full report, please use the following:

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