



Key findings from research on the impact of the Diploma Programme

The International Baccalaureate (IB) Research department collaborates with universities and research institutions worldwide to produce rigorous studies, examining the impact and outcomes of IB programmes. The below findings come from IB-commissioned studies on the Diploma Programme (DP), relating to three key themes: competencies and skills, equity and access, and higher education outcomes.

Competencies and skills of DP students

A study in **Australia, England and Norway** investigated whether student participation in the DP contributed to higher levels of **critical thinking**. Results indicated that IB students had significantly higher levels of critical thinking than their non-IB peers—an advantage that held even after matched samples of IB and non-IB students were used for comparison.¹ Additionally, the advantage of DP students was more pronounced in grade 12 compared to grade 11 students. This suggests that the difference in critical thinking between IB and non-IB students increases over the course of the DP (Hopfenbeck et al 2020).

A study across six countries (**Australia, Germany, Japan, Mexico, Spain and the United States (US)**) measured DP and Career-related Programme (CP) students' **global mindedness**. Researchers used the World Values Survey (WVS) to benchmark IB students against their non-IB peers from a similar age range. DP and CP students across the six countries showed higher levels of global mindedness than young adults in the WVS benchmark groups (figure 1). Additionally, second-year DP students had higher global-mindedness levels than first-year DP students in five out of the six countries (Gándara, Reeves, Schmenner 2021).

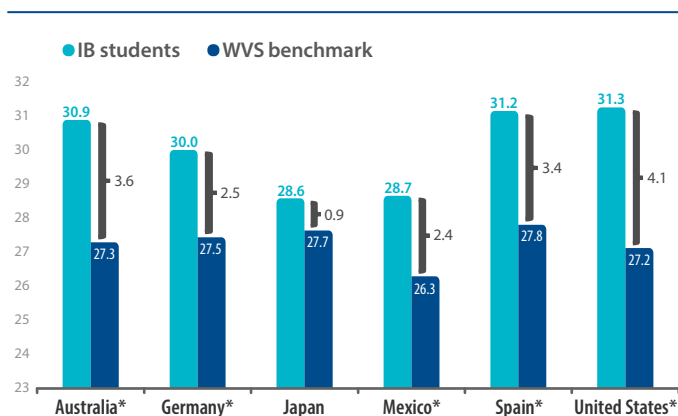


Figure 1. Levels of global mindedness of IB students compared to WVS country-level benchmarks. **Note.** An asterisk (*) indicates a statistically significant difference between groups at 5% level.

A large **global** study investigated the **impact of creativity, activity, service (CAS)** through the perceptions of students, alumni and school coordinators. Study participants believed that CAS helped students to become better at “taking on new challenges”, “learning to persevere” and “developing better interpersonal skills”. Moreover, alumni and current DP students felt that CAS had helped them to become more “communicative”, “willing to accept new challenges” and “collaborative” (Hayden et al 2017).

Equity and access to the DP

In **Costa Rica, Argentina (Buenos Aires) and Peru**, researchers analysed the **implementation and impact of the DP in public schools**. Across all contexts, teachers were highly motivated and committed to being a part of the DP, largely due to characteristics of the programme and the opportunity to work with engaged students. Overall, students in the three educational systems had very positive views of the DP, particularly in helping them to develop research and critical thinking skills. Students also tended to value the DP’s learning style as well as closer relationships with teachers (Beech, Guevara, del Monte 2018).

A multi-year study investigated the **high school and post-secondary experiences and outcomes** of DP students in **US public schools serving students from predominantly low-income households**. The findings indicated that DP students are more motivated and engaged than their non-IB peers. IB students on average had both higher SAT scores and high school GPAs (grade point averages) compared to non-IB students. Results also showed positive and significant effects of IB participation on college retention and graduation rates. Lastly, DP alumni reported that the DP helped prepare them for college coursework, particularly in the areas of writing, critical thinking, study skills and time management (Aldana, Mayer, Ee 2020).

Higher education outcomes of DP students

In a large quantitative study, researchers examined the **post-secondary outcomes** of DP candidates (students pursuing the full DP) who graduated from **US high schools**

¹ Propensity score matching is a statistical technique that allowed researchers to construct matched IB and non-IB samples with similar characteristics for comparison.

in 2013 ($n = 18,660$).² Consistent with previous research (Bergeron 2015; Halic 2013; Caspary 2011), findings showed that 84.6% of DP candidates enrolled in university immediately after graduating from high school compared to 66% of all US high school graduates. Of the DP students who enrolled in college immediately after high school, 90.4% returned to the same institution the following year compared to 80% of all US students (figure 2) (Pilchen, Caspary, Woodworth 2020).

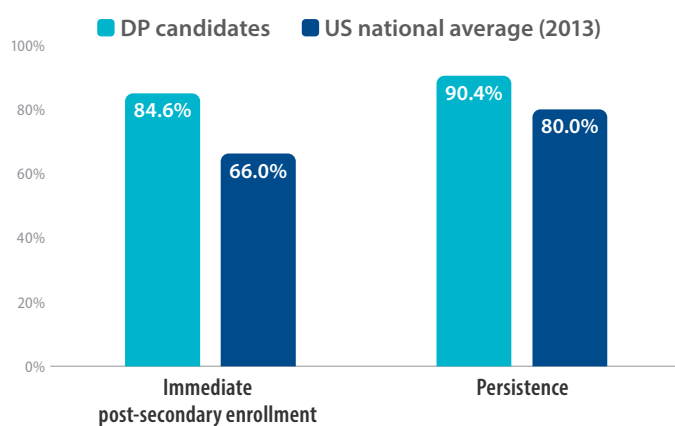


Figure 2. College enrollment and persistence of DP students compared to the US national average (2013).

Researchers explored the **post-secondary experiences and outcomes of DP alumni** at leading universities in **East Asia and Australia**. On average, DP alumni reported higher capacities for a variety of 21st-century skills compared to their non-DP counterparts. IB graduates were also very positive about their DP learning experiences as preparation for higher education—specifically, they felt that the DP had prepared them to engage in classroom discussions and group work, to develop global perspectives and to communicate effectively (Lee et al 2017).

² The study also examined outcomes for DP course students for a total sample size of 37,348 DP course and candidate students.

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A study in the **United Kingdom (UK)** compared the **higher education outcomes** of students who enrolled in UK universities with either an **IB diploma or an A level qualification**. In line with previous research (HESA 2016; HESA 2011), the study found that IB diploma students were three times more likely to enroll at a top 20 higher education institution (HEI), 40% more likely to achieve at least an upper second-class honours degree, and 7% more likely to earn a first-class honours degree compared to matched A level students. Additionally, post-university, IB diploma holders were 38% more likely than their A level peers to be engaged in further study (figure 3: Odds ratios greater than one indicate that IB students were more likely to achieve the outcome) (Duxbury et al 2021).



Figure 3. Odds ratio results by outcome type.