

# RESEARCH BRIEF:

## International Baccalaureate: National trends for low-income students 2008–2014

Research brief developed by the IB Research department based on a report prepared by: Kyra Caspary, Katrina Woodworth, Kaeli Keating and Janelle Sands • SRI International • November 2015



### INTRODUCTION

Given the importance of a college education for employment and social mobility, policymakers and education leaders are attempting to strengthen the pipeline from high school completion through to college graduation. Many low-income students struggle to successfully complete college. Although many factors may contribute to student attrition at various points along the path to a college degree, one key factor is academic preparation.

This study examines the postsecondary trajectories of low-income International Baccalaureate (IB) Diploma Programme (DP) students from US public schools. The objectives of this study are to identify obstacles to low-income students' participation and success in the DP and postsecondary education as well as possible levers to improve outcomes for low-income students.

### DATA SOURCES

This study incorporates findings from three sources: IB exam data from the IB information system (IBIS), National Student Clearinghouse college participation data and qualitative data collected during five site visits to high schools serving large populations of low-income DP students.

### FINDINGS

#### DP participation and performance

Researchers compared the participation rates and performance over time of low-income and higher-income DP students<sup>1</sup>, both those pursuing the full diploma (diploma candidates) and those taking one or more DP courses but not pursuing the full diploma (course students). When possible, comparisons were also made to all students and/or low-income students at the national level.

#### Overall trends

- The DP grew rapidly from 2008 to 2014, with increases in both the absolute numbers of course students and diploma candidates, and the percentages of low-income students in each group. During this time period, the percentage of low-income diploma candidates grew from 15% to 23% and the percentage of low-income course students increased from 18% to 26%.

- Even as the participation of low-income DP students has increased, overall student performance in the DP has remained fairly constant.
- Gaps between the performance of low-income DP students and their higher-income peers persisted over the seven-year period, both in DP exams and pass rates for the diploma. This finding is consistent with studies at the national level which indicate that low-income students do not perform as well on assessments of college readiness as their higher-income peers.

#### Course performance of low-income diploma candidates

- Low assessment scores, particularly in science, mathematics, individuals and societies and arts, were the greatest barrier to successful completion of the diploma for low-income candidates. Conversely, pass rates for the extended essay and theory of knowledge (TOK) were high, so these requirements were not a primary barrier to earning the diploma.

#### Postsecondary enrollment, retention and graduation

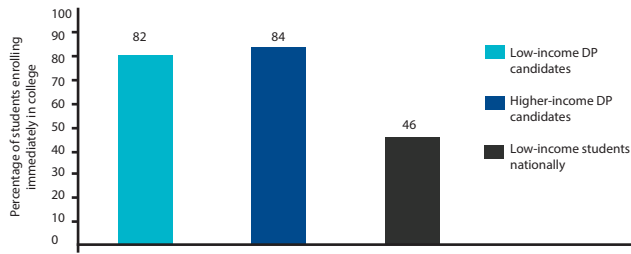
This section highlights specific findings for diploma candidates and course students from the 2008 and 2013 graduating cohorts and examines immediate postsecondary enrollment rates (at two- and four-year colleges), one- and/or two-year retention rates and four- or six-year graduation rates. For a full description of results for the 2008 and 2013 cohorts, please see the full report.

#### College outcomes for low-income diploma candidates

- Regardless of whether they earned the diploma, low-income diploma candidates enrolled in colleges and universities at high rates. In the class of 2013, 82% of low-income diploma candidates enrolled in a two-year or four-year college immediately after finishing high school. In comparison, 46% of low-income students nationally<sup>2</sup> enrolled immediately in a two- or four-year postsecondary institution (NCES, 2014) (Figure 1).

<sup>1</sup>The researchers identified low-income students on the basis of whether they were coded as eligible for free or reduced-price meals (FRPM) in IBIS. Higher-income students include all students who were not identified as FRPM eligible and represent a range of income levels.

<sup>2</sup>This statistic uses a different measure of low-income students. The threshold for the lowest income quintile was \$28,894 in 2013 (U.S. Census Bureau, Current Population Survey, n.d.). Eligibility for FRPM is based on an income of 185% of the poverty threshold, or approximately \$36,000 for a family of three in 2013.



Note. The national data for this figure comes from NCES, 2014. The data for DP students relates to the 2013 cohort. Figure 1. Percentage of DP and non-DP students enrolling in two-year and four-year postsecondary institutions.

- One-year retention rates for low-income diploma candidates (87%) at four-year colleges and universities were close to those of their higher-income peers (92%) in 2013. By comparison, both low- and higher-income DP students had higher first year retention rates than students at four-year institutions nationally (77%) (NCHEMS n.d.).

Low-income diploma candidates who enrolled in four-year colleges and universities had six-year graduation rates (72%) that were higher than both the national average for low-income students (47%) and the national average for all students (59%).

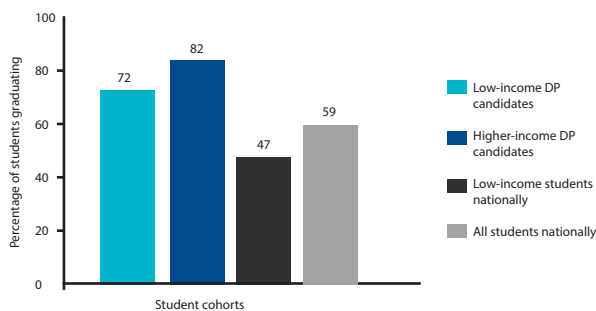


Figure 2. Percentage of DP candidates and non-DP students graduating from postsecondary institutions within six years.<sup>3</sup>

- For the 2013 cohort, low-income diploma candidates who earned 24 or more total diploma points were more likely to enroll directly in a four-year college or university than their low-income peers who earned fewer than 24 total points. Further, low-income diploma candidates who earned at least 30 total diploma points were just as likely as their higher-income peers to enroll immediately in a four-year college (83% and 84%, respectively).

### College outcomes for low-income course students

Course students tended to perform less well than their diploma candidate peers.

- 70% of low-income course students in the 2013 cohort enrolled in a two- or four-year college immediately after high school. This compares to 82% of low-income DP candidates.
- For course students, the retention rate gap between low-income and higher-income students increased from 6 percentage points after one year to 12 percentage points after two years.
- Less than a third (32%) of low-income course students in the 2008 cohort who immediately enrolled in college graduated within four years, although six-year graduation rates were higher (55%). Six-year graduation rates for low-income DP course students (55%) were similar to national six-year graduation rates (59%) and somewhat higher than six-year graduation rates for low-income students nationally (47%).

Overall, this analysis reveals much that is promising in terms of low-income students' access to and performance in the DP and postsecondary education while also highlighting some areas for improvement.

## RECOMMENDATIONS

To better understand the factors that support and hinder low-income students' participation and success in the DP, researchers conducted interviews and focus groups at five schools selected on the basis of their enrollment of low-income students in the DP. The preliminary lessons learned from these case study schools suggest possible actions for other schools that would like to expand access for low-income students and support improved performance. For the detailed list of recommendations, please see the full report.

### Outreach and admission

- Remove barriers to entry and make IB the default pathway (opt-out rather than opt-in policies).
- Actively recruit low-income students with targeted outreach to underrepresented students and their families.

### Teaching and learning

- Aim for mastery and deeper learning within the DP curriculum (cover fewer topics in more depth).
- Allow for flexible deadlines, increase scaffolding and rethink homework.
- Examine trends in student performance to identify barriers to success and modify instruction accordingly.
- Emphasize academic and study skills to prepare students for college success.

### Schoolwide student supports

- Institute opportunities for tutoring and formalize peer supports.
- Establish wraparound services to prevent or respond to factors that might interfere with students' ability to focus on academics.
- Build a culture of high expectations for all students.

### Postsecondary supports

- Create systematic college planning processes for all students.
- Identify resources to facilitate college access for low-income students.
- Proactively provide information to parents about college options, the college application process and financial aid.

<sup>3</sup>For students finishing high school in 2006, 59% graduated within six years (NCES, 2013). 47% of students from families in the bottom income quartile nationally who enrolled in a four-year college in 2003 earned a degree within six years (Radford, Berkner, Wheelless, and Shepherd, 2010). For this statistic, low-income students are defined as those from families in the bottom quartile with first-time college-going students, or less than \$32,000. Eligibility for FRPM is based on an income of 185% of the poverty threshold, or approximately \$28,000 for a family of three in 2003. The data relating to DP students is from the 2008 cohort.

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