

INTERIM REPORT

Study of IB students' high school and post-secondary experiences: US public schools serving students from low-income households

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Background

This research summary highlights interim findings from a longer-term study that is currently underway (2015–2019). The study examines the high school and post-secondary experiences of International Baccalaureate (IB) Diploma Programme (DP) students in US public schools serving students from predominantly low-income households with little or no history of college-going¹. At the high school level, the study explores DP student performance and levels of engagement and motivation compared to non-DP students. The study also investigates the extent to which the DP is associated with preparedness, academic success and resilience at the post-secondary level.

Research design

This study employs a mixed-methods case study approach, focusing on three large high schools in California with a substantial proportion of low-income students. The study includes three main components: surveys of current DP and non-DP students ($n = 1,063$), interviews with current DP students ($n = 36$) and interviews with DP alumni ($n = 8$) enrolled in higher education.

Data is being collected from DP students over several years as they progress from juniors or seniors in high school to first-year university students. Additionally, to address questions relating to the post-secondary experiences and performance of DP students from low-income backgrounds, former DP students attending two-year, four-year non-selective, and four-year selective universities are followed as they progress from year one to year three.

Findings

Preliminary student survey findings²

Learning

Researchers measured respondents' overall learning experiences at school. This variable included survey items such as how confident a student is in his/her ability to choose an effective strategy, and how well a respondent's learning strategies help him/her to learn more effectively. *In predicting students' overall learning experiences, compared to non-IB students, full DP students were more likely to have higher-quality learning experiences. The difference was substantial and statistically significant ($p < .005$).*

¹ "College-going" in this context means attending a higher education institution.

² For each variable in this section, the researchers statistically controlled for student demographic characteristics so they would not influence the results.

Terminology

With regard to IB status, the researchers identified four groups for comparison in this study: **full DP students**, **partial DP students**, **other DP students** and **non-IB students**. "Non-IB students" were those who were not enrolled in an IB programme; these students were used as a reference group to examine the impact of IB programmes on students' educational experiences. "Full DP students" were those who planned to complete the full DP. "Partial DP students" included those who were taking DP courses and planned to take DP exams (including those taking selected DP courses or Career-related Programme (CP) students). Finally, "other DP students" were those who were taking DP courses but did not plan to take DP exams.

Classroom rigour

This variable captured student views on topics such as how often a class connects coursework to life outside of the classroom, how often students are asked to explain their answers, and to what extent students are encouraged to persevere when the work gets hard. *The results showed that both full DP and partial DP students were significantly more likely to perceive their classrooms as rigorous compared to their non-IB peers ($p < .001$).*

Classroom engagement

Student engagement was measured by exploring students' classroom experiences through survey items such as: "I usually look forward to this class"; "I work hard to do my best in this class" and "The homework assignments help me to learn the course material". *Compared to non-IB students, both full DP and partial DP groups were significantly more likely to have better classroom engagement experiences ($p < .05$ for full DP; $p < .05$ for partial DP).*

School engagement

In addition to classroom engagement, this study also explored the extent to which students were involved in diverse after-school activities. *Students taking DP courses tended to participate in more extra-curricular school activities than non-IB students. The most noticeable difference emerged for full DP students ($p < .001$).*

Teacher–student relationships

The study also examined teacher–student relationships by measuring the extent to which a respondent felt supported through his/her relationship with a teacher, including items like: “A teacher gives me specific suggestions about how I can improve my work in this class” or “A teacher explains things in a different way if I don’t understand something in class”. *The regression analysis did not identify any noticeable differences in the relationship of the variables across the different student groups.*

College-going culture

An important topic that this study attended to was the degree to which students perceived a college-going culture in school. In order to investigate this topic, the study examined six items.

1. Teachers work hard to make sure all students are learning.
2. All students are encouraged to go to college.
3. Teachers pay attention to all students, not just the top students.
4. Teachers work hard to make sure that students stay in school.
5. A respondent’s friends in school will attend college after high school.
6. The students in a respondent’s school will attend college after high school.

Both full DP and partial DP students tended to perceive their high schools’ college-going culture in a more positive way than did their non-IB counterparts. The difference was also more apparent for full DP students ($p < .001$) than for partial DP students ($p < .001$).

College advising

This study also examined the degree to which a student received advice about college. *Full DP students ($p < .005$) and partial DP students ($p < .005$) were more likely to have college advising support from their high schools than were non-IB students, meaning that students enrolled in IB programmes in general tended to have more inclusive advice and support in school.*

College aspirations

Finally, this study explored students’ college aspirations by asking a question regarding the highest level of education that a respondent planned to complete. *The results*

demonstrated that students in IB programmes were more likely to have higher educational attainment goals compared to their non-IB counterparts. The difference was substantial for full DP students in particular ($p < .001$).

Preliminary student interview findings

The findings in this section are based on student interviews in the three case study schools (36 grade 11 students in total).

Sense of community

IB students characterized their IB peers as being both diverse and familial. Within the challenging academic environment of an IB programme, researchers also found that students view their peers as supportive. Use of the terms “home” and “family” suggest that students are very comfortable at school and that their academic environment is marked by collaboration rather than competition. As one student explains:

“My peers. We work together. It’s like a small family, kind of, or a small community. We support each other. We hold each other up. We know if someone’s feeling down and say, ‘Hey, what’s wrong?’ ... you know? ‘If you need any help, we’re here’”.

Teachers

Students reported that their teachers and counsellors are both encouraging and demanding. Students appreciated their teachers’ high expectations of them, both academically and personally. It also appears that teachers are willing to spend time outside of the school day to provide extra help to their students. Teachers help students to overcome personal obstacles by sharing their own challenges and by redirecting students’ focus from the present circumstances to a better future. Students also shared that their teachers work hard to keep them motivated.

Extra-curricular activities

DP students participate in a wide variety of sports and extra-curricular activities. These activities seemed to provide students with additional peer- and teacher-led support structures, and gave students a sense of positive self-worth. Students also made important connections between their involvement in extra-curricular activities and performing better in their coursework.

Higher education and career aspirations

The survey findings suggest that students’ aspirations for college and career are motivated by their personal

struggles, and their families' and teachers' expectations. The interview data supported the survey data, indicating that the schools have solid college-going cultures. As one student noted:

"We get to see graduates from the past years that have graduated from Ivy. Then I see these people that go to Berkeley. Recently, this girl went to Harvard. That is really what motivates me to be the best I can be so that I can go to maybe Harvard, Berkeley or Stanford. That's probably one of the reasons that I'm pretty successful, as well as just how everyone's here to tell you, 'You can do whatever you want, as long as you stick to it'".

Preliminary alumni interview findings

Researchers interviewed eight low-income and first-generation college students chosen from a stratified subset of DP alumni who attend a two-year, four-year non-selective or four-year selective college.

Educational resilience of first-generation college students

DP alumni overwhelmingly agreed that their high school experience in the DP prepared them academically for college. One student noted that the DP prepares students for the college workload, and students develop improved time management, writing and critical-thinking skills.

"Most of the stuff that's needed I guess we got it in IB. I guess time management ... my time management isn't the best or where I want it to be but I'm still really good at not procrastinating ... we're really good at ... whipping up a paper really fast. And then when it comes to stuff like critical thinking, we learned a good amount ... so when we got here I guess we knew what tools to use. And most of it is the determination that we have to succeed."

For many first-generation college students, the transition to college can be difficult, but this does not seem to be the case for the students who participated in the DP. All students felt that the rigour and challenge of the DP helped them make the transition to college smoothly. Students reported already knowing how to study, and linked this directly to their high school DP experience; they shared positive academic experiences in college and clear career aspirations in relation to majors. Students explained how their DP experience contributed to a positive academic self-concept and self-efficacy, college identity and career and life goals.

Interviews with college students also showed that first-generation students benefited from the DP experience in terms of college credit and college-level coursework. Students explained how their high school IB coursework helped them to earn college credit or placed them in a higher-level college course. Given the credit some students received from their DP courses, some students planned to take additional courses related to their major or to study abroad.

Conclusion

Overall, the survey data suggests that DP students have a qualitatively different high school experience from their non-DP peers. The survey analysis found statistically significant differences, in favour of DP students, in seven out of the eight outcome variables examined in this study. DP students described feeling a strong sense of belonging in their school that they attributed to their teachers and peers, and to their involvement in the DP. Lastly, the interview data indicates that both DP students and alumni demonstrate many qualities of academic resilience.

This summary was developed by the IB Research department. For more information on this study or other IB research, please email research@ibo.org.

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