

# Research summary

## *Implementation of the Diploma Programme in Ecuador's state schools*

**Based on a research report prepared for the IB by:**

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## Introduction

The country of Ecuador boasts one of the largest populations of International Baccalaureate (IB) Diploma Programme (DP) participants in Latin America, with 708 DP candidates in 2011. There are currently 50 IB-authorized schools in the country offering the DP. Ecuador has shown an exceptionally high level of support for IB education: the Ministry of Education (MOE) undertook an initiative beginning in 2006 to support the development of a DP in each of the country's 22 provinces (now 24 provinces). The efforts during this first phase resulted in 17 state schools offering the DP in the country (with 9 more in the authorization process at the time of this research). Subsequently, it was decided to expand the number of state schools offering the DP into as many of the country's approximately 1,400 state secondary schools as possible.

## The research

The purpose of this project was to examine the implementation and impact of the DP in Ecuador. The research questions that guided this study addressed:

1. the roles of the MOE, the IB and private school mentors in developing and supporting IB state schools
2. the impact of implementation on school practice, teachers and staff
3. student enrollment, and scholastic and non-scholastic outcomes.

## Methods

A mixed-methods research design was employed to address the research questions. The questions pertaining to implementation approaches were addressed using qualitative methods including:

1. school visits at four DP state schools
2. interviews with MOE representatives, IB staff, mentors and state school DP coordinators
3. surveys of DP coordinators and DP teachers.

The questions on student enrollment and performance were addressed using quantitative methods including student-level data analysis and surveys.

# Findings

## Developing and supporting IB state schools

### Government support

The government and the MOE have shown that they highly value the DP. They view the programme as key to improving the rigour and quality of education in the country. The MOE is actively managing the overall IB programme in the country, heading up school selection, and providing financial resources. Problems have been caused by rapid turnover of personnel in the MOE, poor financial management practices and the current system of teacher assignment and compensation. The types of assistance DP coordinators indicated their schools received from the MOE are shown in *Table 1*.

**Table 1: Assistance provided by the Ministry of Education**

	% who agreed	
	Coordinators	
	State	Private
We have received help from the MOE in setting up and running our IB programme.	82	35
The MOE supports the development of the school's IB programme financially.	94	0
The MOE supports the development of the school's IB programme by offering advice or guidance.	65	7
The MOE supports the development of the school's IB programme through providing educational materials or resources.	69	0

State schools were much more likely to have received assistance from the Ministry than private schools.

### IB support

On a formal level, in the original memorandum of agreement signed in 2006, the IB organization committed to:

1. providing the necessary guidance to support the various stages of the process of authorizing the schools
2. engaging in dialogue and constant communication leading to the successful implementation of the DP in authorized schools.

According to the DP coordinators of the four schools visited, the IB provided representatives who assisted them in preparing for authorization by reviewing the criteria with them and meeting frequently to monitor progress. Both the coordinators and teachers spoke, often glowingly, of the professional development (PD) they had received from the IB to prepare them for their roles. For many teachers, the PD was a major benefit of working with the IB and they talked about the ways that they had grown professionally as a result.

### Private school mentors

The original system for mentoring state schools was relatively unstructured. There was much goodwill from private schools and a great willingness to help state schools. The effectiveness of the mentorship was largely dependent on the enthusiasm of those involved.

### School change

Changes in school practice were examined within three sub-categories: school design and structure, pedagogy, and school culture. The changes were seen to be most often, but not always, positive.

## 1. School design and structure

With regards to changes in school design and structure, there were immediate and noticeable changes to the physical campus at each school following the adoption of IB. This seemed to create an expectation that a higher level of education would be offered and served as an incentive. These changes also served as a conduit to the larger world via the technology that was introduced.

## 2. Pedagogy

The pedagogy offered in the DP was noticeably different from that in the non-DP classrooms. In general, DP students were offered well-organized, imaginative lessons with frequent student-teacher interaction. They were clearly active about their learning, able to think in sophisticated ways and expressed themselves well. Not all faculty were teaching in the interactive, thoughtful ways promoted by the IB, possibly due to the difficulties their school experienced with recruiting teachers and the high rates of turnover among teaching staff due to changes in assignments and retirements.

The great majority of surveyed state teachers reported changes in their own pedagogical practices due to their involvement with the DP. Ninety per cent of teachers reported changes in their teaching in general, 94% reported changes in student assessment practices and 95% reported using different teaching materials. Factors cited as contributing to improvements in pedagogical practices at the schools included new laboratories and instructional materials, better professional development, technology available to teachers, support from peers, better long-term lesson planning skills and greater teacher dedication.

**Table 2: Changes in pedagogical practice**

	% who agreed	
	Coordinator	Teacher
The pedagogical aspects of our school have improved due to the implementation of the IB programme.	88	54
I have changed my teaching due to my involvement with the IB programme.	N/A	90
I have changed the way I assess students due to my involvement with the IB programme.	N/A	94
I use different teaching materials (eg textbooks, lab equipment, technology) due to my involvement with the IB programme.	N/A	95
I spend class time preparing my students to take the IB exam.	N/A	77
Our students benefit from the IB theory of knowledge course.	N/A	82
Our students benefit from participating in the IB creativity, action, service component.	N/A	93
Our students benefit from writing the extended essay.	N/A	87
Our school has more access to teaching tools and resources because of the IB programme.	94	77
Teachers in our school have more access to professional development (training) because of the IB programme.	82	53

The IB curriculum was held in high regard, teachers interviewed spoke of their excitement about having access to excellent curriculum guides and instructional resources. The great majority of teachers agreed that their students benefited from IB's creativity, action, service component (93%), the extended essay (87%) and theory of knowledge course (82%).

### 3. School culture

The research on school culture focused primarily on the overall school environment, relationships within the school including professional collaboration, and norms and values attributable to the presence of the DP. On their responses to the survey, about two-thirds of state DP coordinators (65%) and teachers (69%) perceived the implementation of DP to have improved the schools' overall environment. More detail on this topic was obtained from the interviews; for example, one DP coordinator reported:

There is a higher level of dedication to studies ... This makes both students and teachers feel motivated.

However, relationships between IB and non-IB teachers were at times strained. During site visits and interviews it was apparent that there was frequently an initial rift between IB and non-IB teachers that often progressively decreased year by year. There have been many changes in the norms and values of those directly involved with the DP, especially among the students. Many parents spoke of students becoming more responsible, making sure that assignments were done well and on time, and prioritizing schoolwork. They also talked about the students being able to express themselves well and to handle themselves with confidence.

### Student enrollment and performance

Admissions processes are fairly consistent across schools and largely based on government policies. However, schools are having difficulty enrolling and retaining 25 students per cohort. It appears that the most important barrier to participation is the amount of work involved to be successful in the DP. At the same time, many schools are bringing in students via a pre-IB year; this appears to be a good way to help students develop the skills necessary to persist and perform well. Students are representative of the school population in terms of socio-economic status. But in terms of prior achievement they are generally the most academically advanced in their schools.

DP students in state schools performed comparably to those in private schools on language exams. In other subject area exams, private school students generally performed better, although the differences were not large. *Figure 1* shows how students in state and private schools in Ecuador perform. The figure includes all years for which data are available but excludes subjects in which fewer than 100 exams were ever taken.

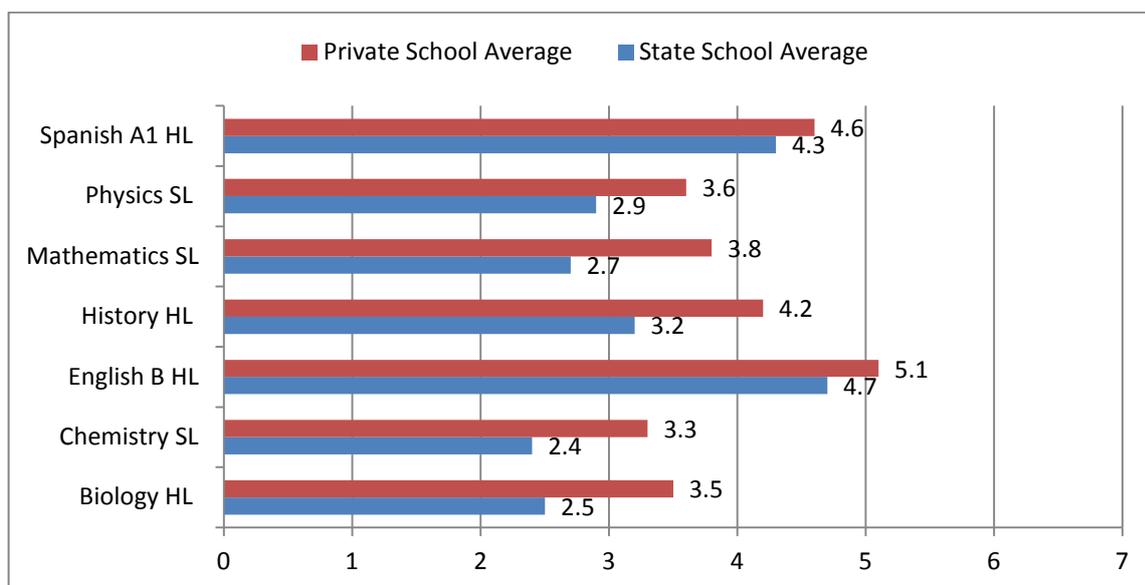


Figure 1: Grades earned in exams ever taken

Figure 2 shows results for May 2012 exams in Ecuador's state schools and a comparison world average. Students in state schools obtained results similar to those of the rest of the world in Spanish. They were behind the world average in the other subject areas that could be compared.

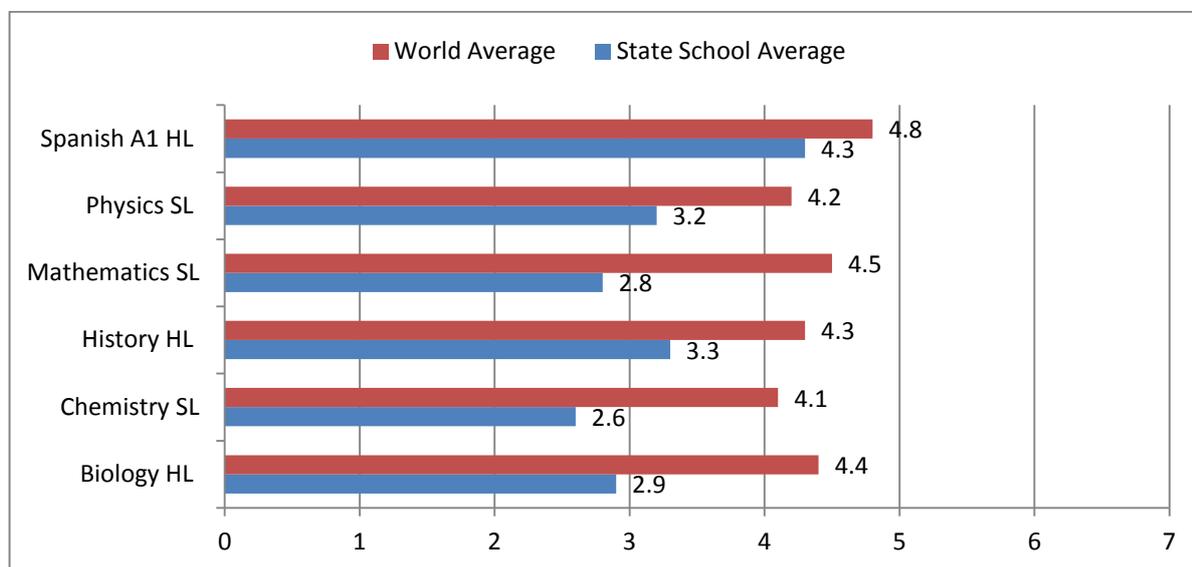


Figure 2: Comparison of major subject exam results in May 2012

While exam grades are not consistently high, students are gaining from participating in the DP in a variety of important ways, including reported university performance, communication skills, critical thinking, maturity and self-confidence.

## Implications and recommendations

The DP appears to be having a profound impact on state education in Ecuador. Many students are gaining and many teachers are growing as professionals. However, multiple barriers stand in the way to reaching the full potential that this opportunity presents. The following are recommendations from the researchers based on the results of this study, which should be taken as “food for thought” rather than clear prescriptions.

- The IB should consider providing quarterly visits from staff and consultants to help new schools resolve problems with implementation during the first year following authorization and periodically thereafter. A field office based in Ecuador could make this more feasible and also strengthen linkages with the MOE.
- The IB should provide a wider range of training options in Ecuador, including more online offerings or alternative PD arrangements. Systems for reserving places in these workshops should ensure personnel from state schools are able to enroll without delays.
- A new memorandum of agreement is needed governing the phase 2 schools that guarantees the budget for IB-led functions as well as the allotment given to individual schools.
- A number of the barriers to student enrollment could be addressed with relatively small amounts of money or other resources. Perhaps schools in need could set up creativity, action, service projects to support the purchase of school supplies in schools in need or US schools could send “CARE packages”. Parent groups could organize to offer student lunches.
- The issue of compensation and teaching assignments for DP teachers came up repeatedly and should be addressed. Teachers are frequently subject to re-assignment, leaving key vacancies in schools’ teaching staff. This should be studied carefully.

## Conclusion

In summary, the IB and the government of Ecuador have an unprecedented opportunity to use the DP to dramatically improve education on a national scale and among students who have few economic advantages. This initiative has a strong beginning, but is at an important tipping point. It will be important to invest the time and resources necessary to make this effort a success.