IB in NB: Lessons learned for New Brunswick policy makers from the expansion of the International Baccalaureate (IB) in Ecuador

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Introduction:

The International Baccalaureate (IB) Diploma Programme (DP) was created in 1968 in Geneva, Switzerland and can now be found in over 159 countries worldwide. IB is rapidly expanding and has experienced a 30% growth in programme offerings between the years 2016 and 2020 (IB, 2022a). While initially IB was designed to serve the children of international expatriates and geographically mobile citizens in fee-based international schools, over half of IB schools worldwide are now in state or publicly funded schools (Hill, 2012; Resnik, 2016). Despite this increase in public offerings of IB programmes the IB continues to have a perception of elitism and is often offered as an enrichment opportunity aimed at helping students from wealthy families obtain admissions into elite universities (Bunnell, 2022). While admission to elite institutions may be a reason students, families, and policymakers choose to attend or adopt IB programming in schools, this is not the only reason. In 2006 the Ministry of Education in Ecuador set out on a goal of improving the overall public education system by rapidly expanding the IB DP in public schools (Resnik, 2014). This reform was implemented by first offering the DP in one school in each province, and then a more rapid expansion, resulting in over 200 publicly funded schools in Ecuador offering the DP. This helped make Ecuador the country with the third most IB schools worldwide after the United States and Canada (Dickson et al., 2018). In this example, Ecuador viewed the IB as an opportunity to improve the education system for *all* students rather than as an enrichment opportunity for some, or for those who could pay for private or independent schooling.

Although Ecuador was able to rapidly increase the IB DP in publicly funded schools, these programs did not last and as of 2022 there were only two public schools offering the DP in Ecuador (IB, 2022b). This paper aims to serve two purposes, first to introduce the IB to those who may be unfamiliar with the organization, and then to explore an educational jurisdiction, Ecuador, that introduced the IB DP to improve the overall education system. Suggestions will then be made for other governing bodies, like the Government of New Brunswick (GNB), when considering adopting the IB as a vehicle for system-wide school improvement. A 2019 policy paper titled: *Succeeding at Home: A Green Paper for Education* cited IB as an area of growth for the province to improve learning for students in need of enrichment. Specifically, under the heading of excellence the province outlined the following action item "ACTION: Government will work to expand the International Baccalaureate program, already in place within the francophone and anglophone sectors, allowing students to pursue an internationally recognized program as part of its public education system" (GNB, 2019, p. 11). The Green Paper highlighted the goal of increasing IB programming, so I will aim to offer suggestions for policymakers based on the experiences of program implementation in Ecuador.

I will begin by first providing context on the IB, a common thread between Ecuador and New Brunswick, and I will then discuss education in both Ecuador and New Brunswick. This paper

draws on primary sources including policy documents and databases from IB and ministries of education, PISA data, and secondary sources such as peer-reviewed literature in the field of comparative and international education, in addition to my own experience as an IB educator and instructor in the IB Educator Certificate at the University of New Brunswick (UNB). Conclusions are then drawn, and suggestions made, in relation to the proposed adoption of IB in NB public schools based on the experiences in Ecuador.

IB Context

While the DP was the first programme to be developed by IB, it is now one of four programmes on what is called the IB Continuum of Education, offering options for students aged 3-19. Schools can offer any of the four IB programmes (DP, Career Programme (CP), Middle Years Programme (MYP) or Primary Years Programme (PYP)) and students are able to enter one programme having not completed any of the others or can complete three programs for the entirety of their primary and secondary schooling. Many schools offer the DP in addition to the provincial, state, or national curriculum and offer a choice for students to enroll.

The DP is a two-year course of study for students ages 16-19 and is generally completed in the final two years of high school. Those studying the DP will take courses in six different subject areas (languages and literature, language acquisition, humanities, sciences, mathematics, and the arts). Students will study a minimum of three of these courses at the higher level (HL) indicating a more advanced level of study. It is also possible to substitute a course in the arts for an additional course in the sciences or humanities. In addition to one course in each of these subject areas, students will also complete core components including the Extended Essay (EE) which is an independent writing project in one subject area, Creativity, Activity and Service (CAS), a program which requires students to engage in artistic, athletic, and service to the community and an additional course called Theory of Knowledge (TOK). To achieve the IB Diploma, which can then be used for post-secondary admission and credit, students must achieve a set number of points (grades) in each subject area and must successfully complete each of the core components. Grades are heavily dependent on the results of final high-stakes external examinations, in addition to an Internal Assessment (IA). Exams are standardized and developed by experienced examiners, not the classroom teachers, and are completed synchronously by students worldwide in either November or May depending on school location (IB, 2019).

While the six subject areas above resemble a traditional disciplinary approach to high school education, IB has several underlying philosophical ideas that set the program apart from a traditional high school diploma. The IB values international-mindedness, student-centred and inquiry approaches to teaching, teaching for conceptual understanding, and all IB programmes are centred on the IB Learner Profile (IBLP), a list of aspirational attributes all students should have. These attributes include: inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective. The IBLP is the IB's mission statement in action and should be used regularly in IB teaching and learning (Bullock, 2011).

The DP represents one end of the IB continuum, for the oldest learners, and on the other end of the continuum is the PYP, for the youngest. The PYP follows the above-mentioned values like the IBLP and international mindedness, but without the intense pressure of external, standardized

assessment. The PYP promotes a transdisciplinary approach to education by providing a framework that is to be used in partnership with the local curricula (IB, 2019).

All students globally, including those in New Brunswick and Ecuador, adhere to the above principles, follow the same curriculum in the DP, and write the same exams.

IB and Education in New Brunswick

Public education in NB consists of two separate systems, one Anglophone and one Francophone. Each system has its own Deputy Minister, who reports to the Minister of Education. NB also has several independent or private schools, which fall out of the direct supervision of the ministry and enjoy relative autonomy, yet no government funding.

IB was first introduced in the province in 1984 at the publicly funded Saint John High School (SJHS), which remains to this day the only publicly funded anglophone IB school in the province (IB, 2022b). Since the introduction of the DP at SJHS, IB has experienced slow growth in NB and as of 2022 there are only four schools offering the DP, with no schools offering any of the other three programmes of the IB Continuum of Education (IB, 2022b). Two of these schools are publicly funded, Francophone schools (École Mattheu-Martin and École Sainte- Anne) and one is an independent anglophone school (Rothesay Netherwood School). With only four IB schools, New Brunswick trails many other provinces including neighbours Nova Scotia and Quebec (see Table 1).

Table 1: Total number of IB Schools (Public and Independent) in Canada by province and territory as of December 2022 (IB, 2022b).

Province/Territory	Number of IB Schools
Quebec	138
Ontario	115
British Columbia	56
Alberta	34
Nova Scotia	15
Manitoba	7
New Brunswick	4
Saskatchewan	4
Prince Edward Island	2
New Foundland and Labrador	2
Northwest Territories	0
Nunavut	0
Yukon	0
Total	**377**

While EECD has identified IB as a possible area of growth for education in the province, there has been little movement on expansion of IB since publication of the Green Paper in 2019. This article is intended to examine the rapid expansion of the IB DP in public schools in Ecuador to learn lessons for a similar expansion should the Green Paper be implemented as suggested by the Province of New Brunswick.

IB and Education in Ecuador

Education in Ecuador is a centralized system, governed by the Ministry of Education (Resnik, 2016). Until the early 2000s education in Ecuador consisted of public institutions teaching a national curriculum and private schools, with the only schools offering IB programmes being private or independent. This began to shift in the late 2000s and educational reform was a centrepiece of the 2006 presidential campaign of successful candidate Rafael Correra (Schneider et al., 2019). The adopted reform included the rapid expansion of IB programming beginning with 17 DP schools, one in each province, being proposed in 2006 (Resnik, 2016). By 2009 these schools were all operational and certified IB schools offering the DP, with more schools to come, until a maximum of 265 IB schools was reached in 2018 (Dickenson et al., 2018). The primary goal of the introduction of IB in Ecuadorian public schools was to improve the education system and to provide more opportunities for high school students (Resnik, 2016; Ponce & Intrigo, 2022). There are several instances suggesting that the school reforms introduced beginning in 2006 were successful including significant improvements in educational outcomes, as measured by the UNESCO Latin American regional test (Scheinder et al., 2019), and results of a comparative study conducted by Ponce and Intrigo (2022) specifically comparing Ecuadorian public schools offering the DP as a treatment to the control group of public schools not offering IB. This study recognized statistically significant higher results in both mathematics and languages in schools offering the DP compared to their non-IB counterparts. The overall education system also experienced increased enrollment and Ecuador's PISA results improved to be in line with both Brazil and Peru, countries Ecuador had previously trailed (Bittencourt, 2020). Introduction of IB was not the only reform introduced during this time, however. Higher standards for teachers, both in recruitment and evaluation, as determined by the Ministry of Education, were also introduced (Scheinder et al., 2019) and an increase in spending on education, from 2.5% of GDP in 2006, to 6% in 2013 occurred (Resnik, 2016). So, while the country experienced various improvements, IB cannot be isolated as the reason for these improvements.

Moving back to the specific implementation of IB in Ecuadorian public schools, even with the introduction of a global, external partner (IB), the ministry of education continued to play an active role in policy and curriculum decisions in publicly funded schools. While standards for the DP are set externally, by IB, the Ecuadorian government-maintained control over choices for students and schools and continued to require students to meet the requirements of both the IB and the national education system. The government also made choices surrounding course offerings and was selective in which courses from the IB catalogue schools could offer. For example, when IB was initially introduced to public schools in Ecuador there was no choice given for students to study art and students had to take a second science course, in this case, physics (Resnik, 2016).

Regardless of which factor contributed the most to the overall improvement of the education system in Ecuador as measured by the ministry of education, one non-contestable reality is the Ecuadorian government was successful in increasing the number of IB schools within the country. In 2018 Ecuador ranked third in the world for most IB schools (after USA and Canada) and the highest per captia ratio of IB schools to country population (Dickenson et al., 2018). An important note here however is that while the number of IB schools grew rapidly, these schools did not last, and as of 2022 there were only two publicly funded IB schools remaining in Ecuador (IB, 2022b). This decline began in 2020 (Ponce & Intrigo, 2022) and while there have been no peer-reviewed studies offering explanation for this decline, several studies have outlined challenges associated with IB in Ecuador throughout its offering in public schools. I will now briefly explore some of these challenges with a hope of identifying possible pitfalls for IB expansion in New Brunswick.

The first challenge worth exploring is the accessibility of IB programming, both in Ecuador and beyond. Due to the academic rigor associated with IB, and high-stakes assessments in the DP, often only top-performing academic students are admitted into IB programs, resulting in school-within-a-school gifted programs (Matthews & Kitchen, 2007). The rigor of the program creates challenges for both teachers and students alike, even for top- performing students. In the case of one school in Ecuador, an entirely different schedule and teaching space for those enrolled in the DP was required to meet the time and curricular demands of the DP (Bittencourt, 2020). Rigor of academic programming is one reason schools and school systems choose to move away from IB or consider alternative programs. This is true of United World Collages (UWC), an international network of 18 schools all offering the IB DP or Career Programme (CP). UWC has been a strong supporter of IB programming and was founded on principles of some of the same educational philosophers in experiential education. This network of schools is now advocating that IB implement significant changes to their overall programs including reducing the content covered in DP courses, updating and improving assessment policies to be less exam-heavy, enhanced opportunities for personalized learning and a realignment with principles of experiential learning, among other things (Bernstein, n.d.). The overall recommendations from this report, published by UWC, advocating for significant changes to the IB is concerning as UWC was one of the founding partners during the creation of IB and IB and UWC share common founders, philosophical ideas, and have a lengthy and intertwined history (Fabian et al., 2018).

A second challenge associated with the adoption of IB programming in schools in Ecuador, and a factor that may have resulted in the subsequent decline, surrounds costs. The government of Ecuador spent an estimated 29.2 million (US) dollars during the expansion of IB in public schools between 2010 and 2017 (Ponce & Intrigo, 2022). This was a massive investment, and one could argue an unnecessary expense for an opportunity for some students when considering the needs of the entire system. High cost of IB programming was also cited as a reason for a school board in Saskatchewan, Canada, to discontinue the program after 30 years of successful implementation (Fitzgerald, 2020).

A third challenge experienced by IB students in Ecuador was a low-level success in receiving the IB diploma. The Ecuadorian Ministry of Education reports a successful completion rate of the IB DP of 32.5% in 2015 and a low of 13.4% in 2011 with a mean success rate of 17.7% for a six-year period (Ponce and Intrigo, 2022). This is in comparison to a 78.16% success rate globally

for all IB schools in 2018, the closest date with available data for comparative purposes (IB, 2022c). While students can still graduate high school and receive a national, or provincial high school diploma while being unsuccessful in the IB DP, a low success rate may result in policymakers questioning if IB should be the focus of school improvement plans.

So, while there is currently no peer-reviewed information explaining the decline in IB programming in Ecuador, factors like cost, access, and student achievement may all have played a role in the removal of IB programmes and should be taken into consideration when other jurisdictions, such as New Brunswick, consider widespread adoption of IB programming.

Lessons learned and conclusions:

While Ecuador once had over 260 IB schools, of which 203 were publicly funded (Dickson et al., 2018) there are now only 81 IB schools in Ecuador, of which only two are public schools (IB, 2022b). The rapid rise and then decline of IB schools in Ecuador may provide useful insight or warnings for the province of NB should the province move ahead with the action items in the Green Paper. The remaining section offers suggestions for GNB when considering implementing IB in NB, based on the lessons learned in Ecuador.

The first suggestion for the implementation of IB in NB would be a controlled and gradual increase in IB schools and not a rapid expansion as occurred in Ecuador. Given the complex nature of IB programming, specific language requirements, and training required for IB teachers a more gradual increase could lead to long-term program sustainability. A slow rollout would allow time for teachers within the current system to be trained, or recruited, to teach the specific programming. As there are currently only two Francophone and one Anglophone IB schools in the province the addition of one more Anglophone school would be a good place to start. Larger urban centres like Fredericton or Moncton would be logical choices for the addition of a new Anglophone IB school. Each of these cities currently have Francophone IB schools, so the addition of a new IB school, even within the Anglophone system, would create opportunities to build professional communities of practice, in person, even within linguistically different communities. IB offers programming in three languages, English, French and Spanish (IB, 2019) and while the language of instruction may be different, the underlying philosophical principles and framework for all IB schools remains the same, creating possible collaborative opportunities.

The second recommendation to come as a lesson learned in Ecuador would be to consider the entire IB continuum of education as a source of IB programme expansion and not only the DP. When Ecuador began educational reform and IB programme expansion in 2006, it occurred through the addition of hundreds of IB DP schools. This focus on the DP mirrors the reality of IB in NB, and Atlantic Canada in general. There are currently 23 IB schools in all of Atlantic Canada, of which 22 are DP schools. Currently the only PYP school in Atlantic Canada is an independent school in St. John's, Newfoundland and Labrador (IB, 2022b). While the DP may be attractive to governments, students, and parents as it offers a globally recognized university entrance certificate, it is a rigorous program that ends in high-stakes assessment and often results in a high level of stress for both students and teachers. Poor results on standardized assessments may have contributed to the decision to end IB programming in Ecuador and could be a similar result if the DP continues to be the dominant IB programme implemented in NB and beyond.

The suggestion here for GNB would be to consider the other programmes on the IB continuum of education, with the PYP first and then MYP. The expansion of PYP and MYP schools in publicly funded Canadian education systems is not unprecedented. The province of Quebec, which currently has the highest number of IB schools in any Canadian province (Table 1), has only four DP schools, with the remaining being MYP and/or PYP schools (IB, 2022b). Considering the PYP and MYP would eliminate the stress of external examinations and remove the selective aspect some school employ when making admission decisions for the DP.

IB PYP begins with the earliest learners and provides a framework schools can use that emphasizes transdisciplinary learning, international mindedness, and multilingualism while still adhering to the government provided curriculum. The PYP encourages student agency and focuses on the IB learner profile (IB, 2019). PYP schools are also required to provide teachers with scheduled time for collaborative planning, with teachers working together to plan school wide initiatives such as the culminating project, the exhibition, as well as school wide units of inquiry. The PYP still encourages rigorous assessment, but this assessment is completed internally and without the risk of external examinations impacting university admission. Beginning with a gradual increase in PYP schools in NB would provide opportunities for the earliest learners, teachers, and parents, to become familiar with IB programming before entering the DP. GNB could beginning with PYP schools and gradually add MYP and finally DP schools, helping to reduce the large learning curve surrounding programme structure and terminology. This suggestion is low risk as the PYP requires schools to still follow provincial curriculum, so students could easily enter any provincial school following the PYP. Unlike the DP, which can suffer from low enrollment due to the rigor of the program the PYP would be accessible to all students and could seamlessly integrate into current schools with relative ease.

So, while EECD has indicated a desire to improve opportunities for students in NB public schools through implementing IB programming, some lessons can be learned from other systems that have used the same phenomenon to improve education systems. I suggest the government consider the full IB continuum of education, particularly the PYP, to gradually achieve the action item outlined in the Green Paper. Through careful planning and implementation NB students could start to benefit from the gold standard in education.

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