## Understanding the IB Diploma for Undergraduate Admissions and First-Year Performance

Andrew Arida - Associate Registrar and Director of Student Recruitment & Undergraduate Admissions, UBC

Paul Sanders - Global Head of Recognition, International Baccalaureate Organization

June 2016





### Agenda

- 1. The IB credential
- 2. Research on the IB
- 3. The IB and UBC
- 4. Why IB?
- 5. The UBC undergraduate admissions model for IB students
- 6. Q&A







## Facts & Figures: The Diploma Programme Around the World







Alumni of the Diploma Programme attend top-ranking universities, studies find.<sup>1</sup>

DP students not only do well academically while in high school, but also go on to perform well at the university level.<sup>2</sup>

DP students in the US who enrolled in post-secondary education immediately after high school **enrolled in and graduated from four-year institutions at much higher rates than the national average.** 

**滴滴滴滴滴滴** 



enrollment at four-year institutions (public and private)



average graduation rate at four-year institutions (public and private)



DP alumni report the IB has profound, long-lasting effects on students' lives. It helps them **develop critical thinking, analytical and writing skills and a broader world view**. In addition, they point out that they

or advanced credits for university<sup>3</sup>

In a recent DP study at the University of Oregon's Honors College,



79<sup>%</sup> of DP graduates in China attended universities in the US, UK, Hong Kong, Singapore and Canada.<sup>5</sup>



International-mindedness means having the opportunity to have doors opened in other countries and widely renowned universities.<sup>6</sup> (DP student, p.38).

A recent study among DP schools in Australia, China and India found that international- mindedness can be categorized as a tool for individual gain, an orientation towards shared understanding and a way to

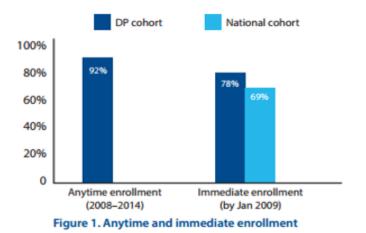


## **University enrollment and graduation**

New research from the UK indicated that DP students were more likely than their A-level peers to attend a top 20 university

	Cohort DP students (N=11,055)	Cohort of similar A-level students (N=11,055)
Top 20 university	45.7%	32.9%

### University enrollment and graduation rates in the United States:



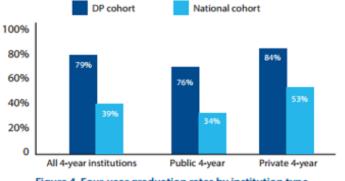


Figure 4. Four-year graduation rates by institution type Note: National data only available for 2007 (NCES 2014)



International Baccalaureate Baccalauréat International Bachillerato Internacional

© International Baccalaureate Organization 2013

# Academic and non-academic outcomes of the Diploma Programme



DP graduates from the United States reported gaining key skills that helped them in college, including:

- time management
- critical thinking
- problem-solving and
- research skills



A study in Australia DP students' ratings of their critical-thinking abilities.

 Results indicated gains in the use of critical thinking skills between the two successive years of the DP.

Perceived TOK outcome	Mean score (SD)	Comparison of means (Year 11–12)
Critical-thinking skills	Year 11: 4.23 (1.25)	t = 3.79 p < .001
	Year 12: <b>4.50</b> ( <i>1</i> .27)	



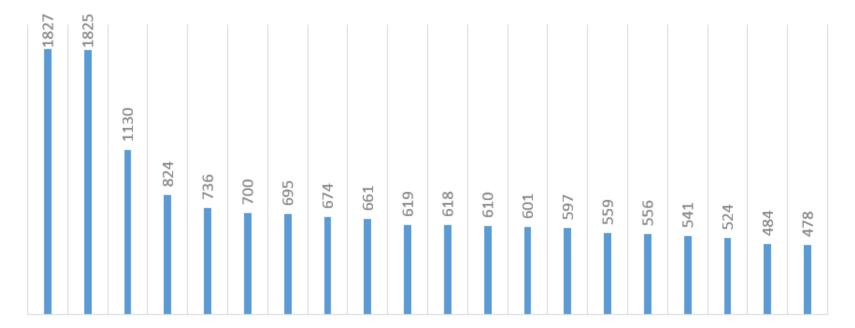
International Baccalaureat Baccalauréat International Bachillerato Internacional

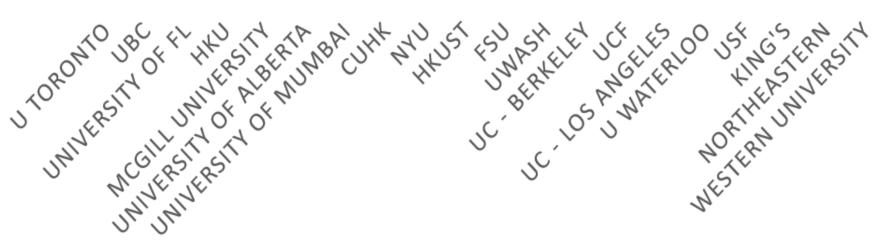
© International Baccalaureate Organization 2013

# Where are IB students, and where they will be

Countries with the most DP exam takers in 2015	Fastest growth rates in the DP exam takers from 2010 to 2015
UNITED STATES	UNITED ARAB EMIRATES
CANADA	PERU
UNITED KINGDOM	CHINA
NETHERLANDS	INDIA
CHINA	DENMARK
INDIA	ECUADOR
MEXICO	SINGAPORE
SINGAPORE	COLOMBIA
ECUADOR	HONG KONG
AUSTRALIA	TURKEY

# The most popular universities and colleges





# **Student Guides**

- Context
- Applying
- Information for IB students
- Where students are coming from and where do they go?
- Information on the 10 most popular universities



### Guide for IB students applying to Canadian institutions

This guide provides a brief introduction to the Canadian higher education system and its application process, as well as information specifically relevant to IB students applying to Canadian institutions from outside of Canada.

#### The Canadian context

Throughout Canada's 10 provinces and 3 territories, there are 98 higher education institutions. Rather than having a centralized federal higher education system, each province and territory has its own distinct education system.

#### Public and private

There are public and private institutions throughout Canada, however the majority of universities are public institutions. Most public institutions have province-wide admissions requirements, whereas private institutions do not need to follow provincial or territorial admissions requirements. Both public and private institutions might offer one or several types of degrees and programmes.

Public institutions receive most of their funding from the provincial, territorial and/or federal government, Private institutions receive the majority or entirety of their funding from alumni donations, faculty research grants and tuition fees. This makes them more expensive to attend, but allows for more resources available to students.

#### **Bachelor's degrees**

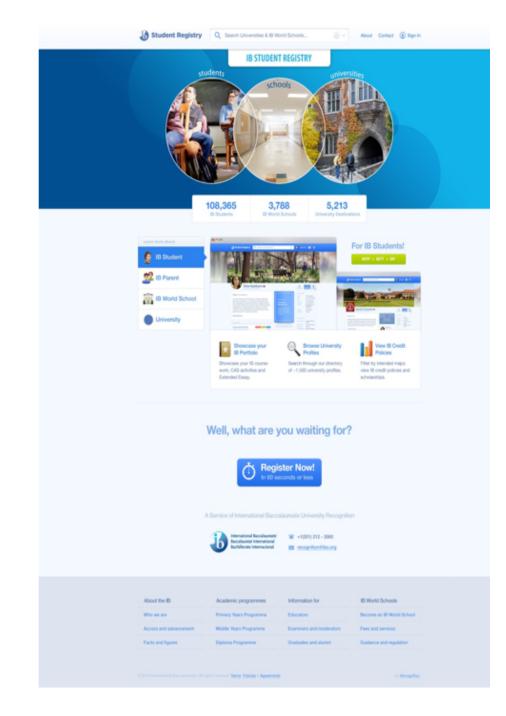
Bachelor's degrees can be obtained at many higher education institutions and are completed in three or four years of full-time study, depending on the province and whether the programme is general or specialized. Some students might complete an honours bachelor's degree, which indicates a higher level of concentration within the subject as well as a higher standard of academic achievement.

#### Liberal arts education

Liberal arts programs offer courses in the arts humanities

# **IB Student Registry**

- Improve the university search process for IB applicants by providing relevant information on credit policies, scholarships, preference for IB students, etc.
- Provide university admissions officers with a communications platform to better inform and reach IB students.
- Provide IB world schools with a public profile to share school information with parents and university admissions officers.





International Baccalaureate Baccalauréat International Bachillerato Internacional







### The University of British Columbia

Last updated December 07, 2015

### About The University of British Columbia

UBC is one of North America's largest public research and teaching institutions, and is consistently ranked among the world's 40 best universities. It is a place where innovative ideas are nurtured in a globally connected research community, providing unparalleled opportunities to learn, discover, and contribute in your own way.

UBC's innovative curricula are taught by leading faculty who use advanced





University Information			
Туре	Public		
Established	Jan 01, 1908		
Enrollment	59,790		
Nickname	UBC		
Mascot	Heat (Okanagan)		
	Thunderbird		
	(Vancouver)		

## **UBC & The IB**

- Admit IB students based upon the anticipated / final diploma score & a personal profile (5-7 short answer questions)
- Second highest post—sec destination of IB transcripts in the world (2015)
- 1,041 IB Diploma and 168 IB certificate students registered in 2015; 15% of direct-entry class has IB experience
- UBC's International Baccalaureate Educator Stream; Canada's only IB teacher education program
- Early research focused on understanding differences in anticipated and final diploma scores



## Principles of Effective Undergraduate Admissions

Applicants will not be disadvantaged by the structure (timing, sequencing, grading schemes) of the educational system followed that provides the basis of admission



## Why IB?



a place of mind

#### THE UNIVERSITY OF BRITISH COLUMBIA

## Why IB?

- 1. Strong presence in local school system
- 2. Diversity: 81 countries represented in 2015 first-year class
- 3. Straightforward, reliable method of assessment for admission



## A reliable method of assessment

UBC Admission Decision Based Upon	Correlation with first year performance
N. America IB, anticipated grades	R <sup>2</sup> = .29, <i>p</i> < .001
N. America IB, final grades	R <sup>2</sup> = .44, <i>p</i> < .001
Ontario secondary school admit avg (final)	R <sup>2</sup> = .27, <i>p</i> < .001
Alberta secondary school admit avg (final)	R <sup>2</sup> = .35, <i>p</i> < .001
BC secondary school admit avg (final)	R <sup>2</sup> = .29, <i>p</i> < .001
US secondary school grade-point average, SAT I, SAT II, and parental / SES combined **	R <sup>2</sup> = .25, <i>p</i> < .001

\*\* From: Geiser, S., & Santelices, M. (2007). Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes. Berkeley: Center for Studies in Higher Education, University of California, Berkeley.



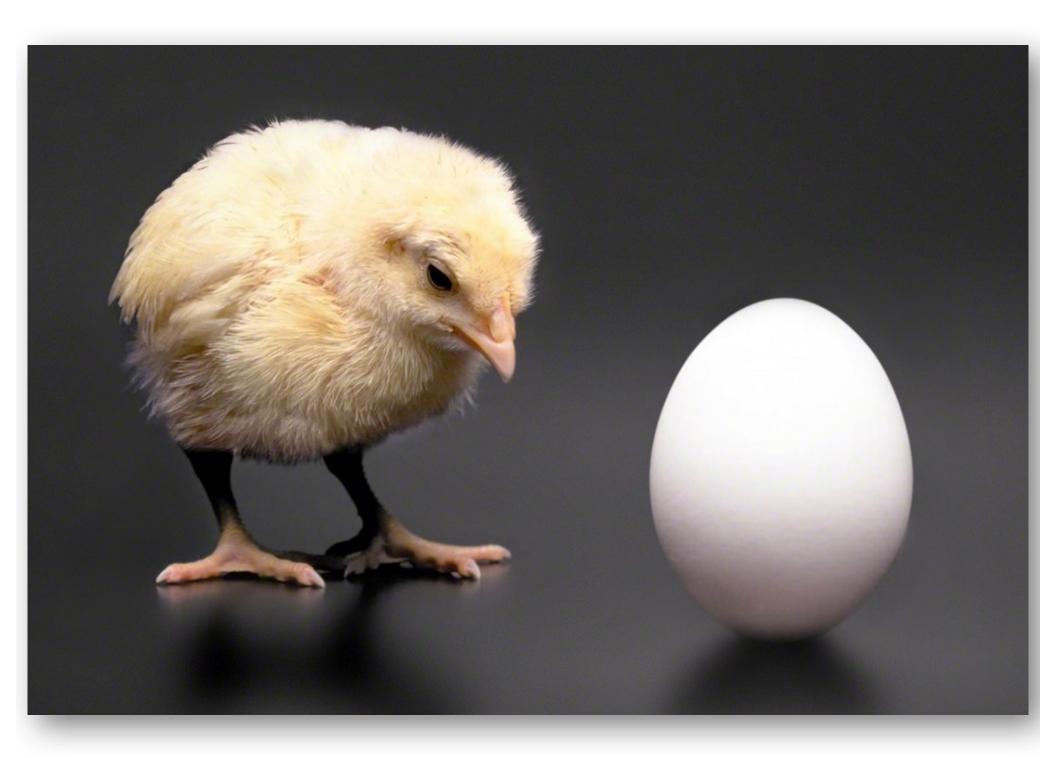
a place of mind

### THE UNIVERSITY OF BRITISH COLUMBIA

## Why IB?

- 4. Data on university performance
  - <u>IB Impact Studies</u> (US, UK, Australia, Mexico, Ecuador); firstyear performance, retention rates, graduation rates
  - UBC: Mean first year average of N. American IB students is 4.35% higher than other N. American secondary school students





## Why IB?

- 5. IB students are prepared and engaged
  - IB Impact Studies:
    - <u>Chicago Public School studies</u>
    - HSSSE, Indiana University-Bloomington
    - <u>U of Virginia study on IB Extended Essay</u>
  - UBC: New to UBC Survey Data



## New to UBC Survey – start of first semester

SKILL/ABILITY	IB	Non-IB
Research skills	35%	9%
Library skills	24%	9%
Ability to read and comprehend academic material	43%	21%
Ability to prepare and make a presentation	47%	22%
Analytical and critical thinking skills	38%	21%
Ability to be clear and effective when writing	40%	20%
Ability to take personal social responsibility	55%	47%
Ability to work as a team member	50%	40%
Ability to motivate and lead others toward a goal (leadership skills)	38%	28%
Ability to speak clearly and effectively in English	72%	60%
Quantitative (mathematical and statistical) skills	31%	27%
Ability to appreciate racial and ethnic diversity	76%	63%

## **New to UBC Survey – end of first semester**

Skill/Ability	IB	Non-IB
Library skills	48%	27%
Research skills	53%	37%
Ability to prepare and make a presentation	43%	29%
Ability to read and comprehend academic material	62%	43%
Analytical and critical thinking skills	51%	41%
Quantitative (mathematical and statistical) skills	34%	31%
Ability to appreciate cultural and global diversity	84%	72%
Ability to take personal social responsibility	65%	58%
Ability to be clear and effective when writing	46%	37%
Ability to understand and appreciate aboriginal cultures	32%	38%
Ability to speak clearly and effectively in English	77%	66%

## **New to UBC – first year experience**

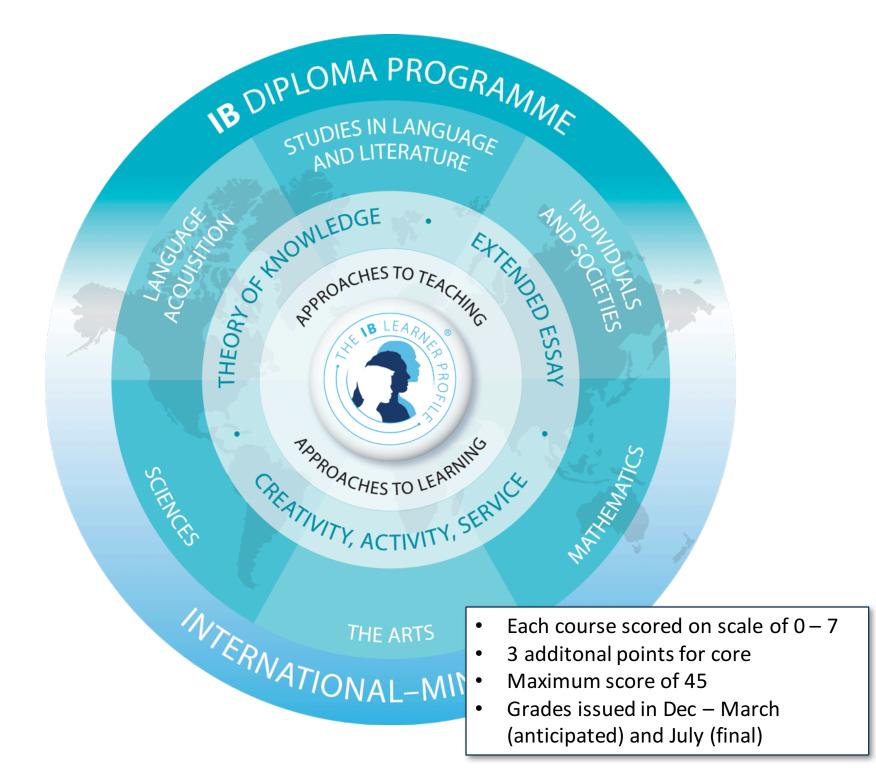
In which of the following activities have you participated in at UBC?	IB	non-IB
participate in a conference	24%	19%
student leadership activities	30%	16%
research with a faculty member	7%	5%
volunteer work	54%	30%
community service as part of a class	12%	9%
student government	6%	3%
political activities (e.g. local, municipal, provincial, federal other than	9%	4%
student government)		
tutoring or teaching other students (paid or voluntary)	21%	11%
attend special lectures	38%	29%
join an intramural team	15%	15%
mentoring programs (student to student, alumni to student)	11%	8%
student club or organization	63%	46%

# **Evaluating the IB in the undergraduate admissions process**

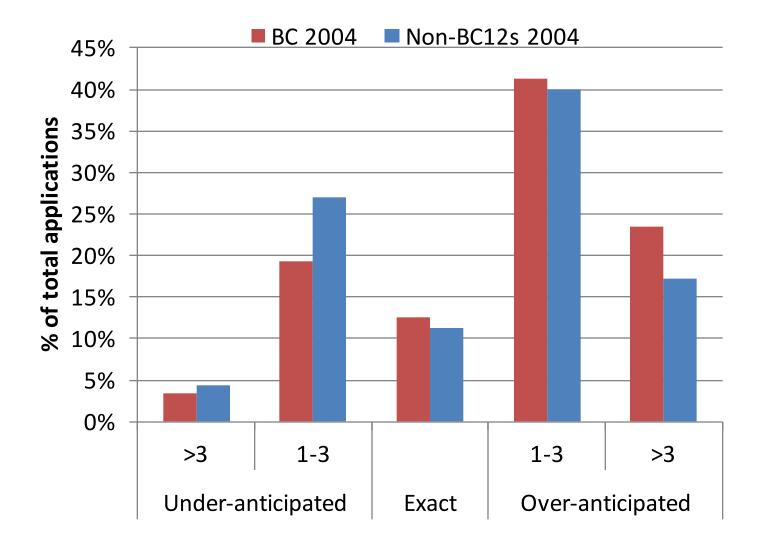


a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA



# Discrepancy between anticipated and final IB diploma scores, 2004



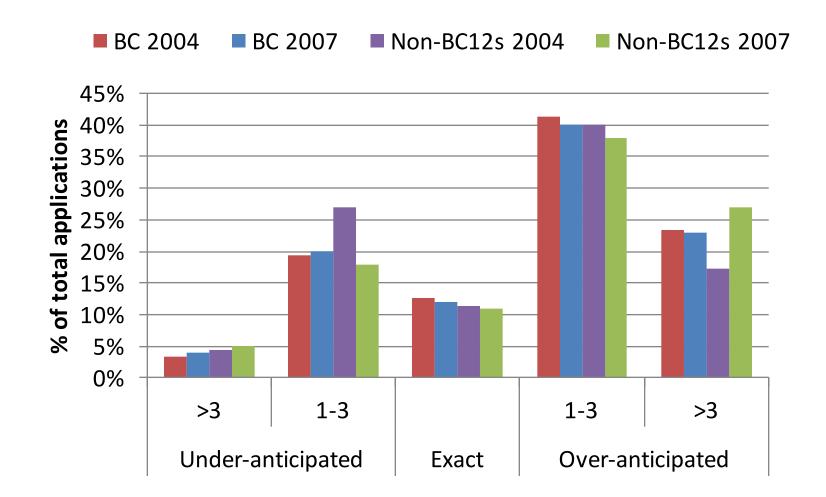
# Accuracy and consistency of anticipated IB grades

- Collaboration with 11 local IB schools and regional coordinator
- Four-year study assessing accuracy and consistency of anticipated IB Diploma grading practices
- Documented change between anticipated and final IB diploma scores
- Yearly reports generated, feedback shared and discussed with schools
- What did we discover?



## **Findings**

Little change in overall accuracy within the system



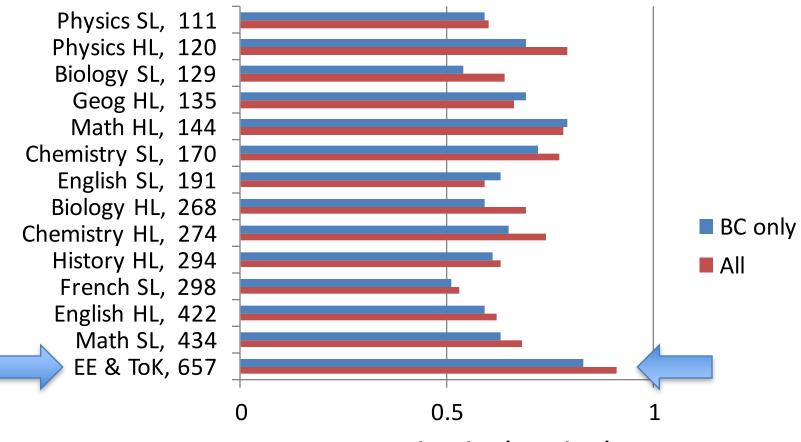
Cumulative effect in IB diploma grades is a factor

BC 12	<b>Over-estimation</b>
English 12	85% / 83% (+2%)
Math 12	85% / 83% (+2%)
French 12	85% / 83% (+2%)
Biology 12	85% / 83% (+2%)
Overall	85% / 83% (+2%)

• Cumulative effect in IB diploma grades is a factor

BC 12	<b>Over-estimation</b>	IB Diploma	<b>Over-estimation</b>
English 12	85% / 83% (+2%)	English HL	6 / 5 (+1pt)
Math 12	85% / 83% (+2%)	Math SL	6 / 5 (+1pt)
French 12	85% / 83% (+2%)	French HL	6 / 5 (+1pt)
Biology 12	85% / 83% (+2%)	Biology SL	6 / 5 (+1pt)
		Geog HL	6 / 5 (+1pt)
		Chem SL	6 / 5 (+1pt)
		EE & ToK	3 / 2 (+1pt)
Overall	85% / 83% (+2%)	Overall	39 / 32 (+7)

Restriction of range in IB diploma grades



Mean over-estimation (IB points)

### Manual grade adjustment does not increase equity

	Anticipated IB Grades, 2007			
	no adjustment -1		-2	
% true admits	82%	79%	73%	
% false admits	12%	10%	5%	
% false refuse	3%	6%	12%	
% true refuse	3%	5%	10%	

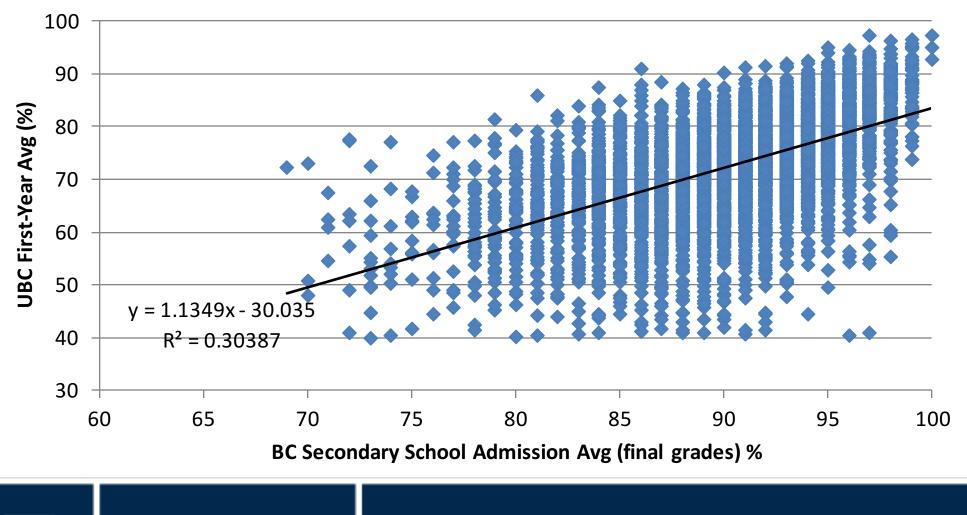


### Solution:

- Don't worry about what anticipated IB diploma scores tell us about final IB diploma grades
- Evaluate IB Diploma applicants based upon what anticipated IB diploma scores tell us about first-year performance at UBC

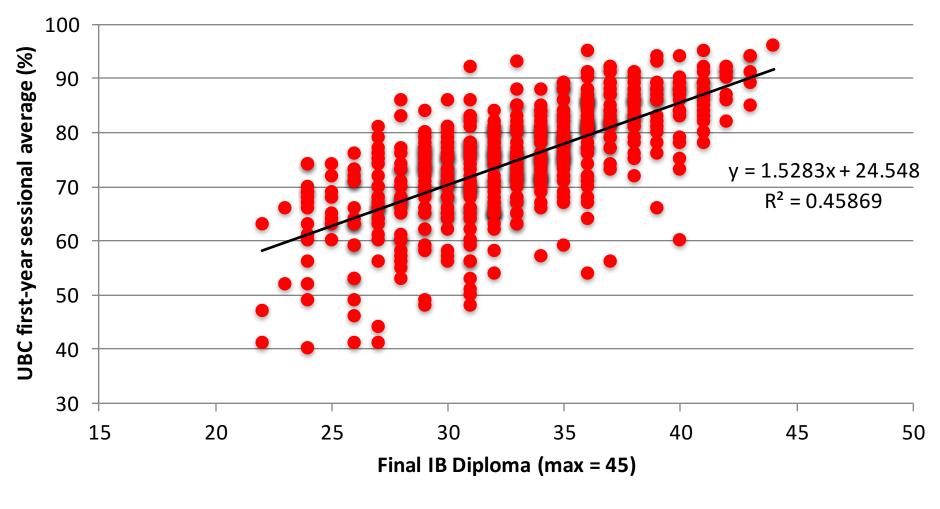


# First-year performance at UBC and final admission averages, BC secondary school students, 2013 and 2014





### THE UNIVERSITY OF BRITISH COLUMBIA

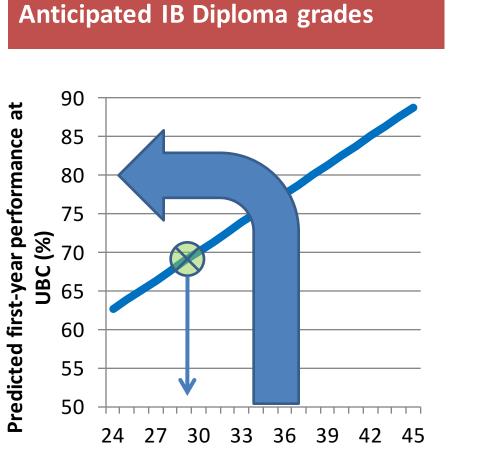


THE UNIVERSITY OF BRITISH COLUMBIA

a place of mind

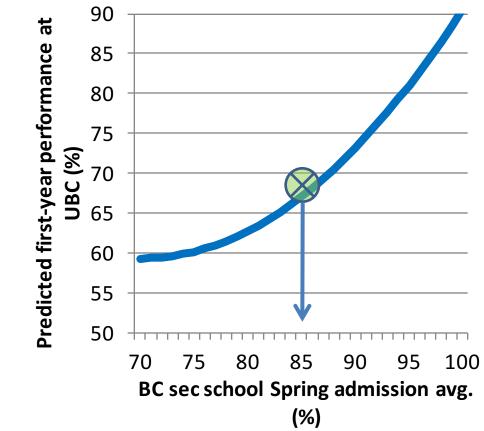
### First-year performance at UBC, IB Diploma Students from Canadian Secondary Schools, 2010 and 2011

### **Determining equivalencies in the academic evaluation**



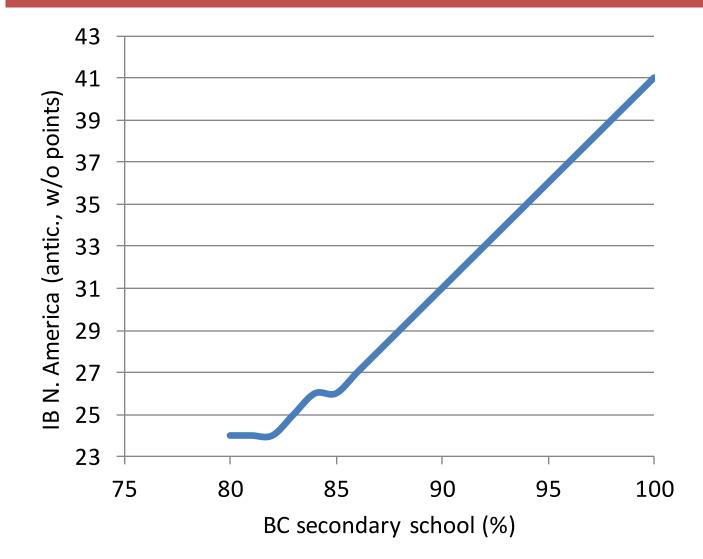
**BC IB Anticipated Diploma Scores** 

Spring BC 12 admission averages



### **Determining equivalencies in the academic evaluation**

### Spring BC 12 admission averages / IB N. America (Antic)



# IB Diploma anticipated scores calibrated to BC/Canada secondary school grades

### Anticipated IBDP without additional points

BC/Canada Sec. School	B	B+ 80%-	A	A+
	75% - 79%	85%	86% - 89%	>=90%
North America IB		24 - 26	27 - 30	>= 31

### **Final IBDP with additional points**

BC/Canada Sec. School	B	B+ 80%-	A	A+
	75% - 79%	85%	86% - 89%	>=90%
North America		24 - 27	28 - 30	>= 31

## **Anticipated point scores**

True Anticipated Scores Rec'd	% with Add'l Points		
Sec School	Applicants	Registrants only	
BC	97%	96%	
Can	96%	94%	
China	56%	44%	
USA	39%	28%	
World	54%	47%	
Total	78%	70%	

- *True Anticipated*: Defined as submission of an anticipated diploma point score including six IB courses with or without additional points
- Cannot distinguish between predicted zero and non-reporters
- Conclusion: Consistency can only be achieved without additional points



# Admission decisions with or without the anticipated points?

			Secondary School				
		BC	Can	China	USA	World	Total
With	(n)	774	164	38	9	431	1416
Add'l	Overestimation >=3	37%	33%	63%	33%	32%	35%
Points	Overestimation >=4	26%	20%	42%	22%	24%	25%
Without	(n)	812	181	73	31	847	1944
Add'l	Overestimation >=3	29%	26%	56%	19%	39%	34%
Points	Overestimation >=4	19%	16%	38%	13%	26%	22%

- Confirms previous study; accuracy of additional points is particularly an issue in BC
- Without additional points, overestimation is a bigger issue outside of N America
- Anticipated scores *without* additional points are slightly better predictors of first year success than anticipated scores *with* additional points.



### **Predicting first-year success for IB students**

- IB grades: anticipated/final with/without additional points
- IB school: geographic location of the IB school
- New school: whether the established school is a new, "newer", or established IB school
- English: whether the student took Engl A, Engl B, HL or SL
- Math: whether the student took Math HL
- Program: program at UBC



### **Predicting first-year success for IB students**

- IB grades: anticipated/final with/without additional points
- IB school: geographic location of the IB school
- New school: whether the established school is a new, "newer", or established IB school
- English: whether the student took Engl A, Engl B, HL or SL
- Math: whether the student took Math HL
- Program: program at UBC



### Higher Level IB, Standard Level IB & Yr1 Credit

- UBC gives first year credit based upon performance in Higher Level IB courses (and some Standard Level).
- UBC recognizes the positive impact of Higher Level English and Higher Level Math in the undergraduate admission decision.
- Is skipping ahead into second year courses a concern? No!

Upper Yr courses in Yr1	Can 12 IBDP (2011 & 2012) w/credit	Yr1 Avg at UBC (%)
0	339	74.8
1	101	75.6
2	63	76.2
3	26	77.8
4	12	77.1
5	8	78.8
6	3	88.7
11	1	78.0



a place of mind

#### THE UNIVERSITY OF BRITISH COLUMBIA

### Conclusions

- IB students tend to be academically strong, highly engaged firstyear students.
- IB diploma is a very strong predictor of first year success.
- The vast majority of IB students perform in first year at the same level as an A- student (in the Canadian system) or better.
- Even with some over-anticipation in anticipated grades, assessments are very reliable.
- IB students with transfer credit succeed when entering directly into upper year classes.

