

Data VizArt – The Student Challenge 2018

Information and Guidelines

Business Case:

As an international educational hub, how is Canada faring at attracting and integrating a diverse student population?

Using the data sets provided (a **minimum of 3 must** be used for analysis), teams must create a data story using Tableau visualization software that either supports or negates the above statement. Teams may use the following (but not limited to) as guideline for their analysis and story presentation.

- Number of international students studying in Canada by province, program, etc.
- Share for Canada of the international student market
- Program fee vs graduate earning figures
- Number of international students choosing to remain in Canada as permanent residents after graduation.
- Canada's reputation as a provider of high-quality educational opportunities

Important considerations:

- **No other external datasets** can be used for creating the visualization.
- All datasets are publicly available (Open Data) and provided by Open Data Exchange (ODX)
- Data is provided in both excel file format as well as a Tableau workbook (twbx file) – teams may use either as a source for their Viz

Data Sources Provided

Data Source	Data Table	Description	Web Page URL
StatsCan	1. Graduate Earning	National graduates survey, estimated gross annual earnings of graduates working full-time, by province of study, level of study and sex	http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=4770066
StatsCan	2. Expenditure on Education	Public and private expenditure on educational institutions, by level of education, Canada, provinces and territories in millions of current dollars.	http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=4770136&pattern=&stByVal=1&p1=1&p2=31&tabMode=dataTable&csid=
StatsCan	3. Economic Growth	Gross domestic product, income-based, provincial and territorial	http://www5.statcan.gc.ca/cansim/a46?lang=eng&childId=3840037&CORId=3764&viewId=2
StatsCan	4. Enrollment by Prov	Postsecondary enrolments, by registration status, Pan-Canadian Standard Classification of Education (PCSCE), Classification of Instructional Programs, Primary Grouping (CIP_PG), sex and student status	http://www5.statcan.gc.ca/cansim/a05?lang=eng&id=4770019
StatsCan	5. Enrollment by Prgm		
Open Canada	6. Grads by Year	Postsecondary graduates, by student status, country of citizenship and sex	http://open.canada.ca/data/en/dataset/d4cb9e6a-4dcb-4301-885e-1cfba0ea19a5
StatsCan	7. Tuition By Province and Program	Weighted average tuition fees for full-time Canadian undergraduate students, by field of study	http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=4770021&tabMode=dataTable&p1=-1&p2=9&srchLan=-1
		Weighted average tuition fees for full-time international undergraduate students, by field of study	http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=4770023&tabMode=dataTable&p1=-1&p2=9&srchLan=-1
Open Canada	8. Perm Res App by Country	Applications Received for Permanent Residents By Source Countries	http://open.canada.ca/data/en/dataset/53105221-7652-47b1-96e2-1f85715a067c
StatsCan	9. Conversion by Country	Transition rates to permanent residence in the ten years following the receipt of the first study permit, and source country's log of GDP per capita	https://www.statcan.gc.ca/pub/75-006-x/2015001/article/14299-eng.htm

Data Dictionary

Data Table	Field Name	Field Description
1. Graduate Earning	Ref_Date	Reference date
	GEO	Geography (Country, Province)
	LEVEL	Post-Secondary Level (e.g. College, Bachelor's, Masters, Doctorate)
	Percentile	Graduate earnings in a certain percentile
	Graduate Earnings(\$)	Average earnings from new graduate students
2. Expenditure on Education	Ref_Date	Reference Date
	GEO	Geography (Country or Province)
	LEVEL	Post-Secondary Level (e.g. College, University, Bachelor's, Masters, Doctorate)
	Education_Expenditure(\$)	Public and private expenditure on educational institutions in millions of current dollars.
3. Economic Growth	Ref_Date	Reference Date
	GEO	Geography (Country or Province)
	Economic_Metrics	Economic metric type (GDP, Compensation)
	Amount (\$)	Measure of the economic metric
4. Enrollment By Prov	Ref_Date	Reference Date
	GEO	Geography (Country or Province)
	Level	Post-Secondary Level (e.g. College, University, Bachelor's, Masters, Doctorate)
	Registration status	Student registration status (Full time, Part-time)
	Gender	Gender
	Student Type	Type of student(International, Canadian, not reported)
5. Enrollment by Prgm	num_of_students	Number of Students
	Ref_Date	Reference Date
	GEO	Geography (Country or Province)
	Program of Study	Program of Study
	Student Type	Type of student(International, Canadian, not reported)
6. Grads By Year	num_of_students	Number of Students
	Ref_Date	Reference Date
	GEO	Geography (Country or Province)
	Level	Post-Secondary Level (e.g. College, University, Bachelor's, Masters, Doctorate)
	Student Type	Type of student(International, Canadian, not reported)
	CoC	Country of Citizenship
7. Tuition By Province and Program	Gender	Gender
	Number of Graduates	Number of students who graduated
	Ref_Date	Reference Date
	GEO	Geography (Country or Province)
	Program of Study	Program of Study
8. Perm Res App by Country	Student Type	Type of student(International, Canadian, not reported)
	Tuition	Weighted Average Tuition
	Ref_Date	Reference Date
	CoC	Country of Citizenship
9. Conversion by Country	Permanent Resident Applications	Number of Permanent Resident Applications
	Ref_Date	Reference Date
	Country of birth	Country of birth
	Log GDP per capita	Log of GDP per capita
	Number of Students	Number of Students
	Converted Students	Converted Students