

Graphing Educational Attainment of Canadians

In this activity, students are given Statistics Canada data related to the educational attainment of Canadians presented in table format, which you must convert into an appropriate graph. You must then explain the results in 2-3 sentences.

Length  30 min (Small Problem)

Prerequisites Graphs (pie, bar (one and two variable(s)), histogram, frequency polygon), Tables (simple frequency distribution and crosstabulation with percentage)

Concepts Graphs, Tables

Themes Inequality, Power, Population change

Disciplines Sociology, Geography



Scenario

You are a 2nd year CEGEP student in the Social Science program.

Some of the courses you have taken so far are: Introduction to History; Introduction to Psychology; Macro Economics; Quantitative Methods; Introduction to Sociology; French and English level I; 1 Physical Education course; 2 Humanities courses.

This semester you are taking a Sociology of Education class (level 2), in which one of the assignments is a group presentation. In two weeks, each group (comprised of four students) will have to give a 10-minute presentation to the class on a specific topic. Your group is assigned the topic of **Educational Attainment** of Canadians. The teacher did not define the parameters of this assignment, as such; groups can decide the content (as long as it relates to their topic) and the presentation style.

In your first group meeting, you realize you do not know much about the educational attainment of Canadians. In fact, your group is already divided and arguing about a few key ideas: whether everyone today has at least a high school diploma, whether men are more likely or less likely to have a University degree compared to women and whether these numbers are changing over time, etc. By arguing, your group realizes that no one knows for sure, as everyone is giving their opinion.

After much discussion and back-and-forth with your group, you decide that there would be a lot of value in finding real data related to the educational attainment of Canadians. However, you are not sure what kind of data exists.

After a Google search, your group finds Statistics Canada data about the percentage of Canadians who did not complete high school over time; highest level of education completed; employment rates depending on level of education; income based on different levels of education. The data you found is already in table format.

The data comes from various sources, including the Labour Force Survey (1990 to 2016), the Canadian Income Survey (2012 to 2014), and the Canadian Survey on Disability (2012). For more information about each of these data sources, please see below in the reference section.

There is disagreement about how the data should be presented for the class presentation. Two group members want to show the frequency distribution tables that you found from Statistics Canada, but you and another group member think it would be better to show the data graphically. You want to do well on this presentation! You know that reading tables can be difficult, especially for students who do not have a Quantitative Methods background, and you also know that a lot of data in a table does not always give a clear overall picture.



What you need to produce and Evaluation grid

| Graphing Educational Attainment (2%) | |
|--|-----------|
| 1. Correct graph based on the level of measurement of the data | /5 |
| 2. Properly formatted graph | /5 |
| 3. Thoughtful interpretation (2-3 sentences) | /1 |
| Total | /2 |

Breakdown of the problem

1. In order to prove to the two other members in your group that it would be better to show the data graphically, you decide to convert one of the tables into an appropriate graph (with proper formatting). You do this by hand.
2. After you create the graph, write 2-3 sentences to explain the results of the graph to your group. Remember, say something interesting about the data.

Table 1: Percentage of All, Men and Women, aged 25-34 who did not complete high school 1990-2016

| | All % | Men % | Women % |
|------|-------|-------|---------|
| 1990 | 20.9 | 22.4 | 19.4 |
| 1991 | 20.2 | 21.7 | 18.7 |
| 1992 | 19.2 | 21.0 | 17.4 |
| 1993 | 17.7 | 19.4 | 16.1 |
| 1994 | 17.9 | 19.5 | 16.2 |
| 1995 | 16.2 | 17.7 | 14.8 |
| 1996 | 15.2 | 17.2 | 13.2 |



Table 1: Percentage of All, Men and Women, aged 25-34 who did not complete high school 1990-2016

| | All % | Men % | Women % |
|------|-------|-------|---------|
| 1997 | 14.1 | 15.6 | 12.6 |
| 1998 | 13.4 | 14.4 | 12.5 |
| 1999 | 12.8 | 14.3 | 11.4 |
| 2000 | 11.8 | 13.1 | 10.4 |
| 2001 | 10.7 | 11.7 | 9.6 |
| 2002 | 10.8 | 12.4 | 9.1 |
| 2003 | 9.8 | 11.3 | 8.2 |
| 2004 | 9.4 | 11.0 | 7.9 |
| 2005 | 9.2 | 10.6 | 7.8 |
| 2006 | 9.0 | 10.5 | 7.5 |
| 2007 | 8.7 | 10.3 | 7.0 |
| 2008 | 8.2 | 10.1 | 6.3 |
| 2009 | 8.1 | 9.6 | 6.7 |
| 2010 | 7.9 | 9.3 | 6.6 |
| 2011 | 7.6 | 8.9 | 6.3 |
| 2012 | 7.8 | 9.3 | 6.4 |
| 2013 | 7.5 | 9.1 | 6.0 |
| 2014 | 7.4 | 9.0 | 5.8 |
| 2015 | 6.7 | 8.0 | 5.3 |
| 2016 | 6.9 | 8.5 | 5.4 |

Source: Statistics Canada, Labour Force Survey, 1990 to 2016.



References

Published by authority of the Minister responsible for Statistics Canada.

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Catalogue no. 75-006-X

Frequency: Occasional

Ottawa

ISSN: 2291-0840

<https://www150.statcan.gc.ca/n1/pub/75-006-x/2017001/article/14824-eng.htm>

