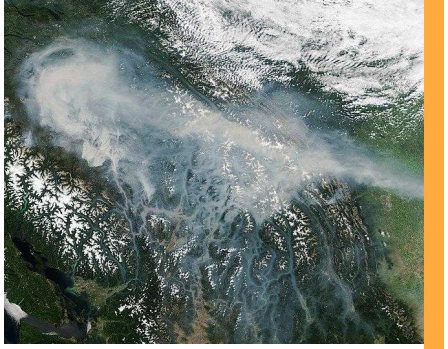




Canada, Climate Change and Education: Opportunities for Public and Formal Education

Focus on British Columbia

Regional Report

A project of

Lakehead University

Learning for a Sustainable Future LSF

L'éducation au service de la Terre LST

With support from

SSHRC CRSH

Leger Metrics

About The Survey

The purpose of this national survey is to gain an understanding of Canadians' current levels of knowledge and perceptions of climate change and its risks, assess Canadians' views on how the education system should respond to climate change, and provide a snapshot of climate change education practice in Canada.

Total respondents:

3,196

Languages:

English • French

Target Audiences:

General Public in Canada
Parents of K-12 students
Youth in grades 7-12
Educators of grade K-12

Why should I be studying for a future that soon will be no more, when no one is doing anything whatsoever to save that future?

And what is the point of learning facts within the school system when the most important facts given by the finest science of that same school system clearly mean nothing to our politicians and our society?

- Greta Thunberg, 2018

Why The Survey

Moving Canada toward resilience and adaptability for climate impacts today and in the future will require support and action at all levels of Canadian society.

This study establishes Canada-wide baseline data reflecting audiences' knowledge and understanding of climate change, their perspectives on the importance of climate change and its risks, and views on the role of schools and climate change education. It is presented both nationally and from provincial/regional jurisdictions.

The study also provides insights into climate change education practice from an open-sample (OS) of teachers and a closed-sample (CS), which is representative. These results are significant in providing an unprecedented snapshot of teacher practice in Canada.

Methodology - National Data

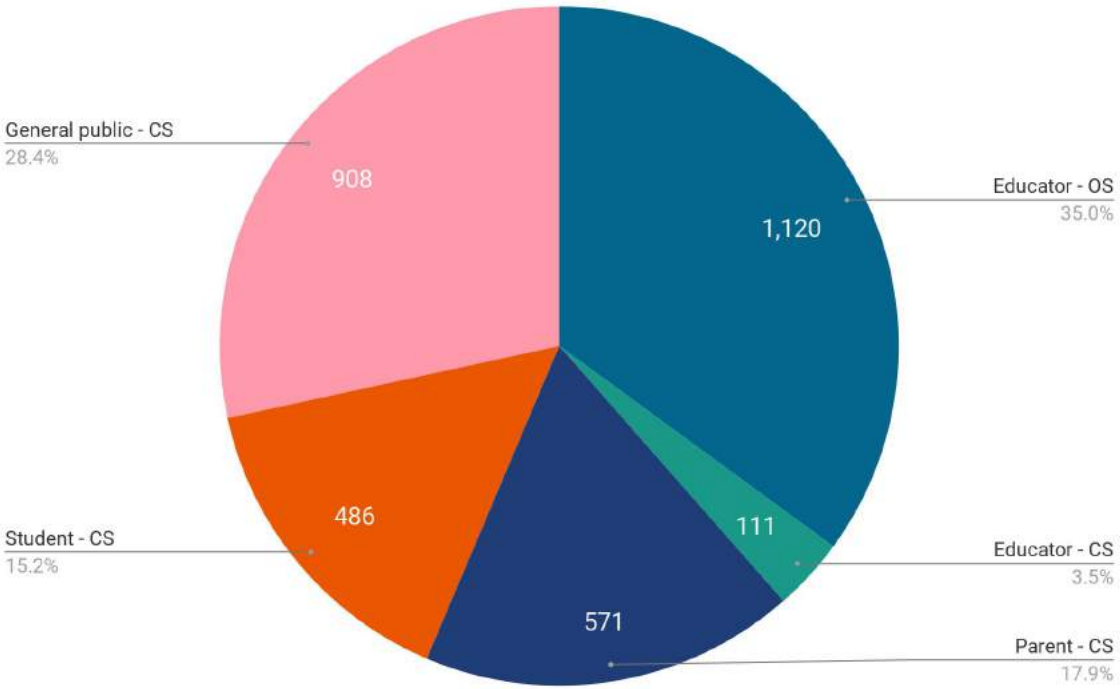
This survey tool was developed in May 2018 by Dr. Ellen Field, Lakehead University, with Learning for a Sustainable Future and Leger Research Intelligence.

The survey was conducted online through Leger, who operate one of Canada's largest online survey panels of approximately 400,000 Canadians. In total, 2,191 responses were collected through Leger's survey panel (closed sample - CS) from the general public, parents, students, educators, and district leaders/school administrators. This included 111 Educators (K-12 teachers and district leaders). The CS sample is representative of the Canadian public.

In order to reach a significant number (1,000+) of educators, the survey was also distributed via Learning for a Sustainable Future through an Open Sample (OS) which was publicly available . While OS responses were received from all audiences, only the K-12 teachers and district leaders (1,120) were included in this report. Since the OS data is not subject to the same controls as the Leger panel survey (CS), the OS results for educators are presented separately from the CS results in this study.

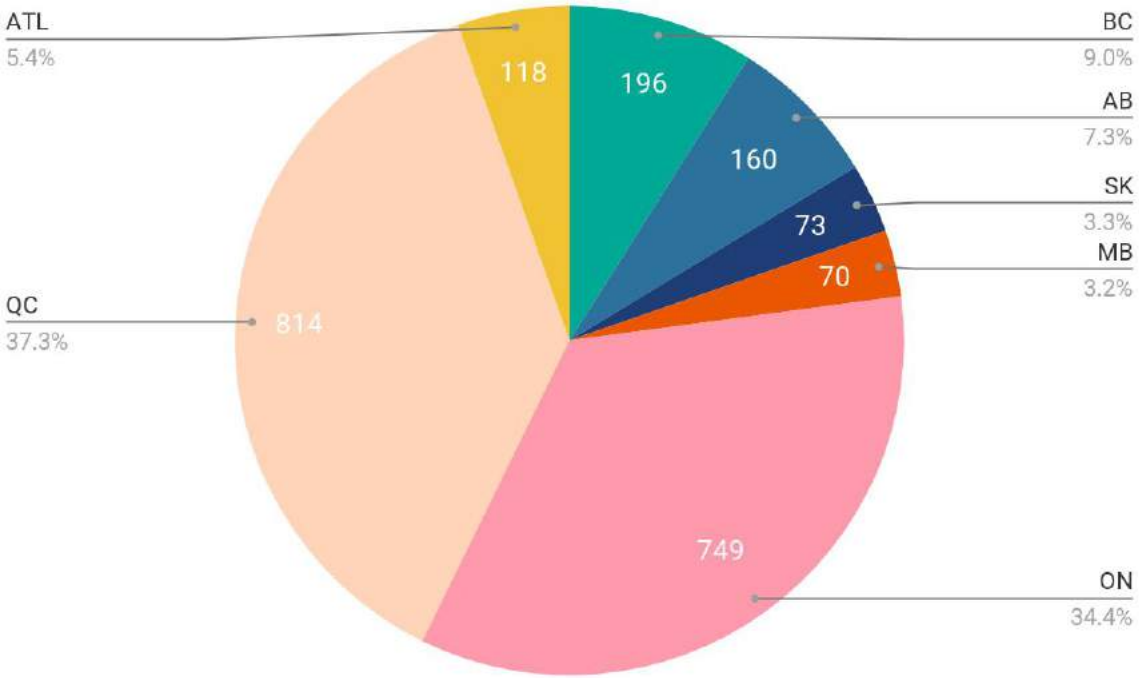
See Methodology section in National Survey Report for full description.

National Respondents



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS= 571, Student CS= 486, General Public CS= 908)

Provincial/Regional Respondents



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

Survey insights: Perspectives of Canadians*

- **Canadians are concerned about climate change**

  79% of Canadians are concerned about the impacts of climate change and 78% believe there are risks to people in Canada.

- **Canadians are certain that climate change is happening**

  85% of Canadians are certain that climate change is happening.

- **Canadians are less sure about the human impacts**

  In response to a question early in the survey 46% of Canadians indicated that they think climate change is caused mostly by human activity. Further into the survey when asked if they think human beings are responsible for climate change 73% agreed.

- **Canadians are less certain that carbon dioxide and other GHGs cause climate change**

  48% of Canadians correctly attributed carbon dioxide and other GHGs are primary causes of climate change.

***Canadians = average of closed-sample respondents (students, parents, teachers, public)**

Survey insights: Knowledge, Understanding and Information

- **43% of Canadians failed the climate change knowledge test**

  43% of Canadians answered 4 or fewer of the 10 knowledge questions correctly

- **Significant gap between perception and awareness**

  While half (51%) of Canadians feel they are well-informed about climate change, only 14% correctly answered 8 - 10 knowledge questions. 86% agree they need more information on climate change.

- **Canadians get climate change information predominantly from television news**

  When asked which sources of climate change information Canadians trust the most, 72% of Canadians said scientists/academics; however Canadians get climate change information from television news (54%), documentaries (48%), and conversations with friends and family (47%).

***Canadians = average of closed-sample respondents (students, parents, teachers, public)**

Survey insights: Impacts and Action

- **Canadians are already seeing the impacts of climate change**

  While only 36% of Canadians reported that they have personally experienced the effects of climate change, a majority feel that climate change is causing or making the following worse: droughts (72%), hurricanes (69%), wildfires (76%), coastline erosion (75%), river flooding (73%), and severe winters (70%).
- **Two thirds of Canadians are taking action to reduce climate change**

  ⅔ of Canadians have reported taking actions to reduce their personal contribution to greenhouse gas emissions.
- **There is doubt that technology will solve climate change**

  Only 30% of Canadians agree that new technologies will solve the problem without individuals having to make big change.
- **Systemic change is needed**

  57% of Canadians believe their actions have an impact on climate change while 79% agree that, while personal actions are important, systemic change is needed to address climate change.

***Canadians = average of closed-sample respondents (students, parents, teachers, public)**

Survey insights: Role of Education

- **Canadians and educators agree that more should be done to educate young people about climate**

  65% of Canadians, 76% of closed-sample educators and 82% of open-sample educators think the education system should be doing more to educate young people about climate change.

- **Limited class time spent on climate change content**

  Only ⅓ of closed-sample educators and 59% of open sample educators reported teaching any climate change. For teachers who do integrate climate change content, most students experience 1 - 10 hours of instruction per year or semester.

***Canadians = average of closed-sample respondents (students, parents, teachers, public)**

Survey insights: Role of Education Cont'd

- **Teachers need support**

  Only 32% of closed-sample educators feel they have the knowledge and skills to teach about climate change. Educators say they need professional development, classroom resources, current information on climate science, curriculum policy, information on the economics and politics of climate change, and national/provincial climate data.

- **All teachers should be teaching about climate change**

  Climate change content is predominantly taught in science and social studies, when it is covered. 75% of closed-sample teachers and 81% of open-sample teachers believe that climate change education is the role of all teachers.

***Canadians = average of closed-sample respondents (students, parents, teachers, public)**

Survey insights: Students

- **Students are a key group to target with climate change education and action**

  46% of students ages 12-18 are categorized as “aware,” meaning they understand that human-caused climate change is happening, but they do not believe that human efforts will be effective.

Survey insights: Regional Responses

- **AB & SK frequently diverge from the rest of Canada**

  In general, levels of certainty that climate change is happening, overall knowledge of climate change, concern about impacts, acknowledgement of risks, and support for a greater focus on climate change education are lowest in AB and SK.

Formal Education Recommendations

- Ministries of Education should release policy statements guiding climate change education
- Ministries of Education should revise curricula to embed core climate change expectations across subjects, with a focus on multiple dimensions of climate change including scientific and environmental, social, cultural, and economic; climate impacts and risk; mitigation and adaptation strategies; and dimensions of justice and ethics
- Ministries of Education should develop a consultation mechanism for youth to participate in curriculum development and review processes for climate change content
- Faculties of Education should ensure teacher-candidates' courses address best practices of climate change education

Formal Education Recommendations Cont'd

- School boards and teachers' unions should provide professional development to enhance teacher knowledge, tools and strategies for teaching about climate change, thereby increasing teachers' confidence and ability to engage students.

  Provide instructional strategies for handling different points of view on aspects of climate change and inquiry processes for fostering critical thinking and evidence-based dialogue.

  Provide resources to help students understand citizen movements and the process of systemic change.

  Provide teachers with current national/provincial climate data and classroom resources including lesson plans, videos and books to ensure students are learning up-to-date, locally-relevant information.

- To address apathy and eco-anxiety, school boards, schools and teachers should ensure student learning is authentic and relevant to local climate impacts, utilizing strategies including inquiry, experiential learning, opportunities for deliberative dialogue, and community partnerships for local climate action.

- School boards should provide information on emerging and already established green sector career pathways for teachers and guidance counsellors.

Public Education Recommendations

- Informal education should provide Canadians with more information about climate change from trusted sources including scientists and academics, utilizing television and radio news programming, online news, documentaries and movies.

- Informal education should address predominant misconceptions about climate change and improve public understanding of its primary causes, enabling citizens to understand the need for responses to climate change, such as greenhouse gas reduction policies, and the urgency of this need.

- Informal education should provide Canadians with information resources on high impact personal climate actions that they can integrate into their daily lives.

Public Education Recommendations Cont'd

- Informal education agencies should provide a guide book and resources to help parents and grandparents to know how to talk to children and young people about climate change. This resource should draw upon current environmental psychology research.

- Informal education should share case studies of how stakeholders can work together to address climate change locally and nationally, focusing on collective processes that lead to systemic changes.

Methodology - British Columbia

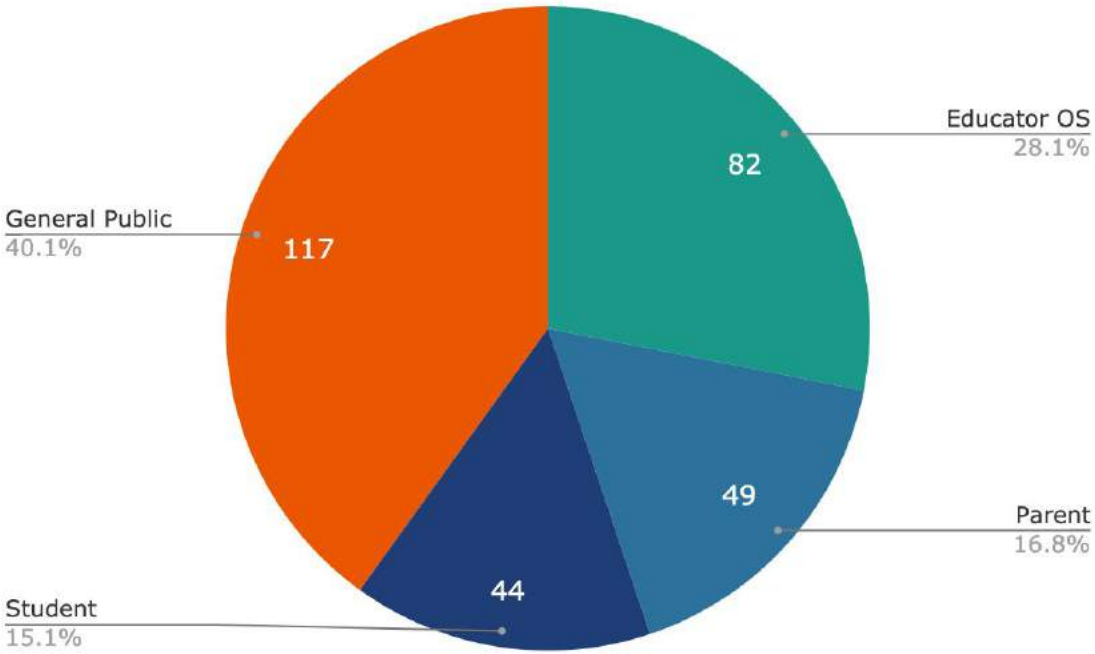
To generate an overview of the province of British Columbia, data from both open-sample (OS) and closed-sample (CS) respondent groups are included to provide a snapshot of British Columbian perspectives on:

- Current levels of knowledge
- Perceptions of climate change and its risks
- Assess British Columbians' views on how the education system should respond to climate change
- Report on climate change education practice in BC schools

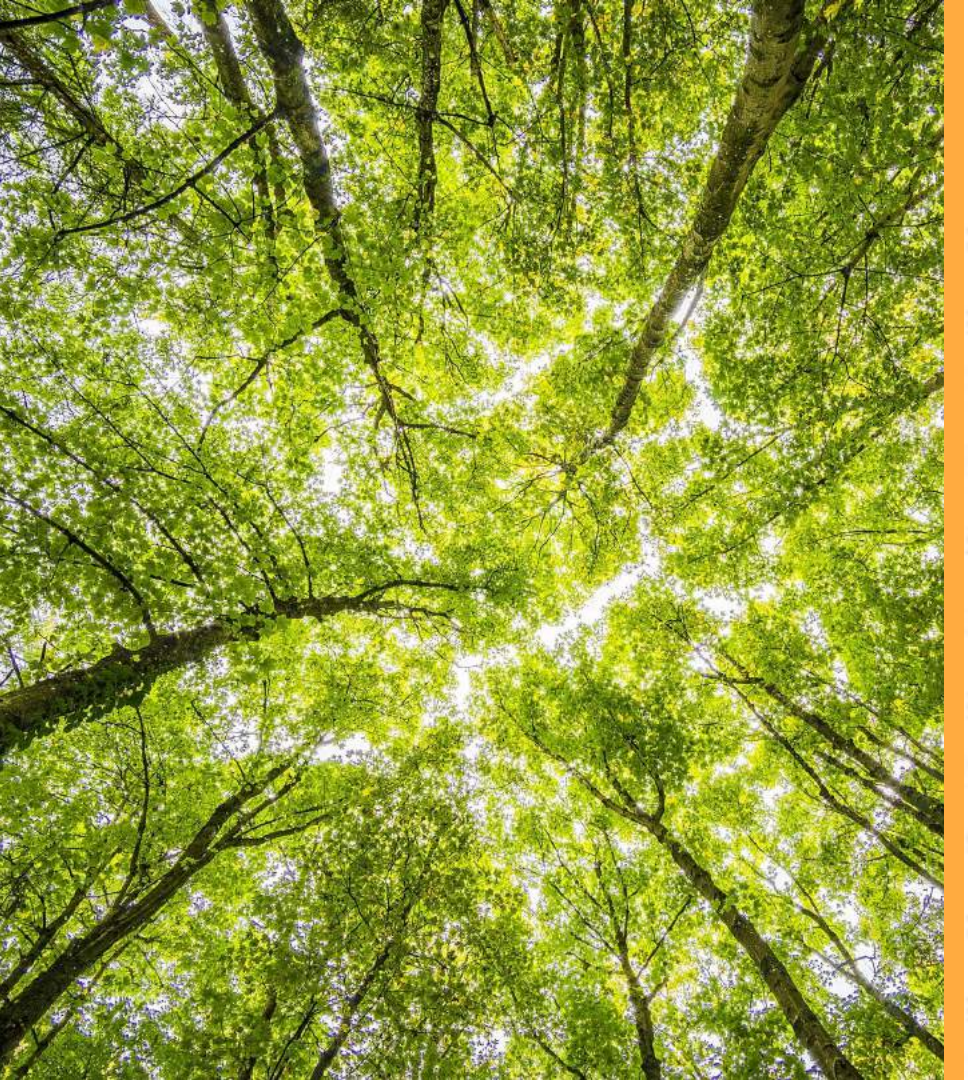
For Educators, we were only able to include responses from those who volunteered as the open-sample and were unable to include responses from the educator closed-sample due to having less than 30 respondents (which is too small for reliability). The visualizations and data that you will see throughout consistently drew on:

• Educator OS = 82	• Parent CS = 49
• Educator CS = <30 (not included)	• Student CS = 44
	• General Public CS = 117

British Columbia Respondents



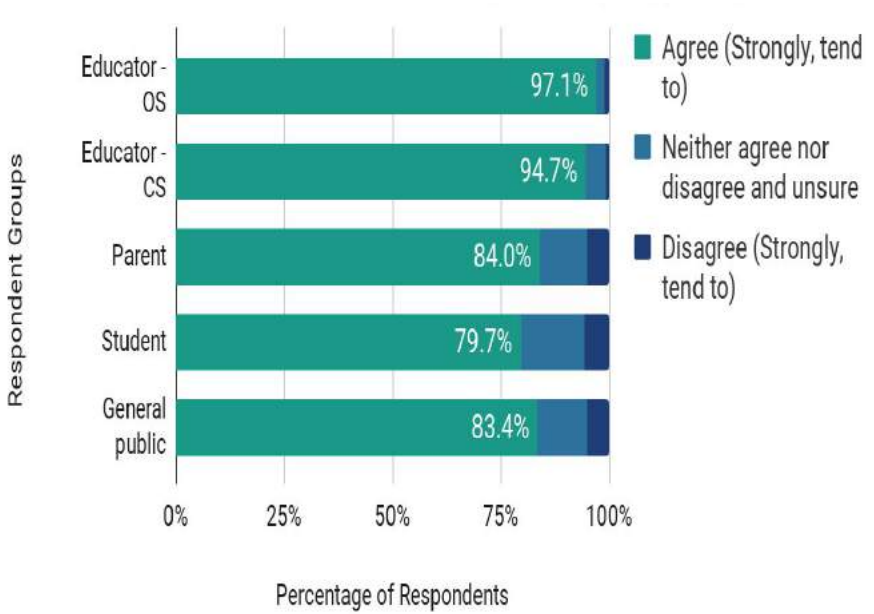
n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)



Perceptions

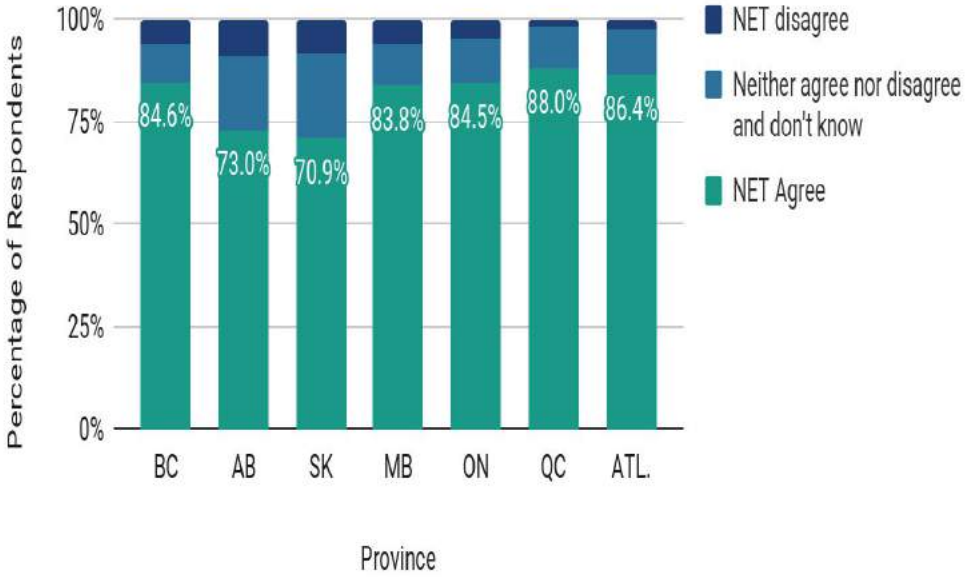
I am certain that climate change is really happening

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

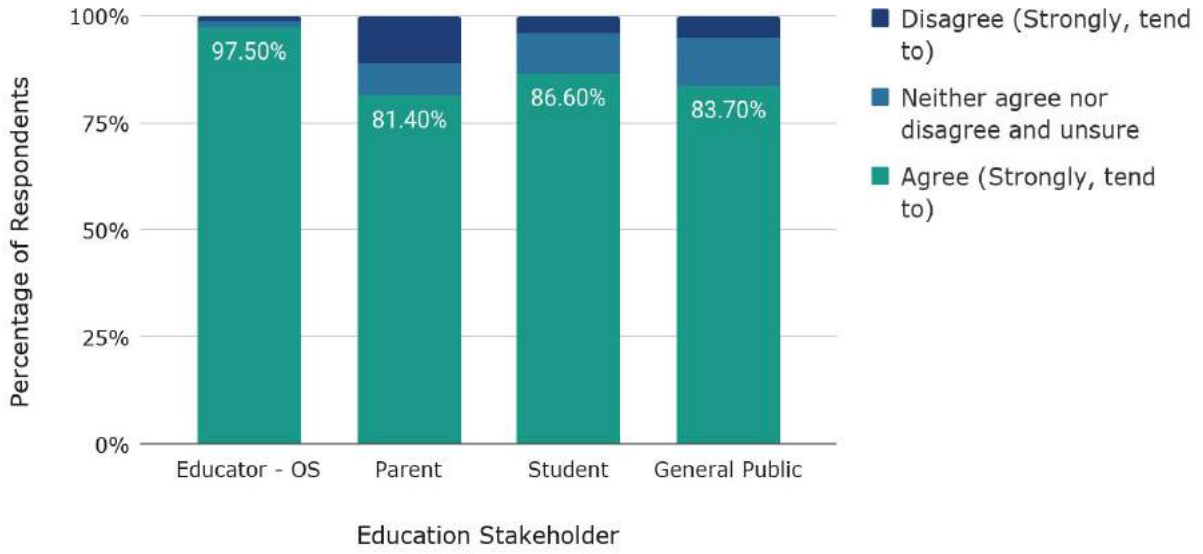
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

I am certain that climate change is really happening

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

I am certain that climate change is really happening

National

Overall, the vast majority in all groups identify climate change as happening. Educators demonstrated the highest degree of certainty (97% OS and 95% CS) with other groups acknowledging the reality of climate change with a lesser degree of certainty: 83% of members of the general public, 80% of students and 84% of parents.

Provincial

Across Canada, most educators, parents, students, and members of the general public in most provinces accept that climate change is happening (BC = 85%, MB = 84%, ON = 85%, QC = 88%, ATL= 86%); however, this acceptance drops to 73% in Alberta and 71% in Saskatchewan. The regional rates of acceptance of climate change are slightly below other public opinion polling on Canadians' acceptance of climate change, recorded as 88% (EcoAnalytics, 2018).

British Columbia

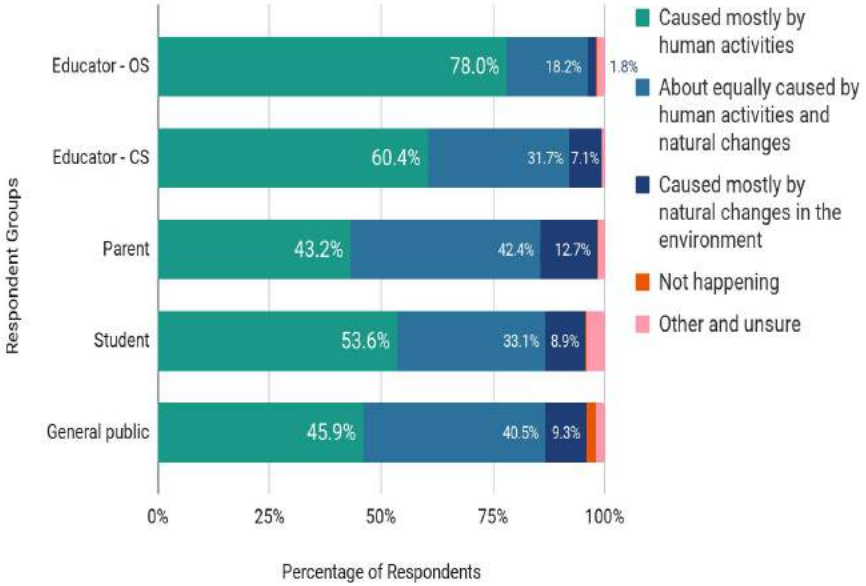
Across BC, respondents believe that climate change is happening. The trend of responses mirrors the national results with educators reporting the highest level of certainty (98% OS). The belief in climate change among students was higher than parents in BC, this differed from the overall trend in the national results.

British Columbia to National Data Comparison

Results in BC are similar to the national results - educators are most certain compared to other respondent groups

Do you think climate change is…

National Results



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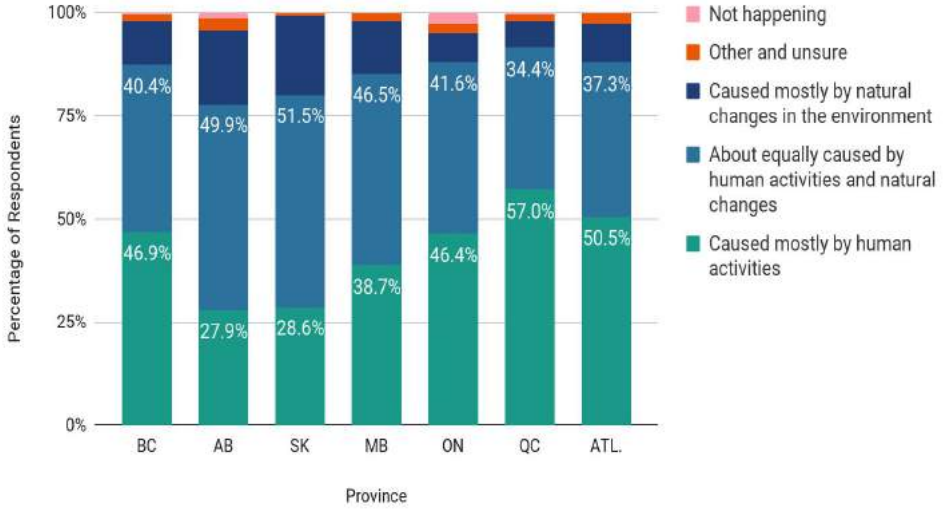
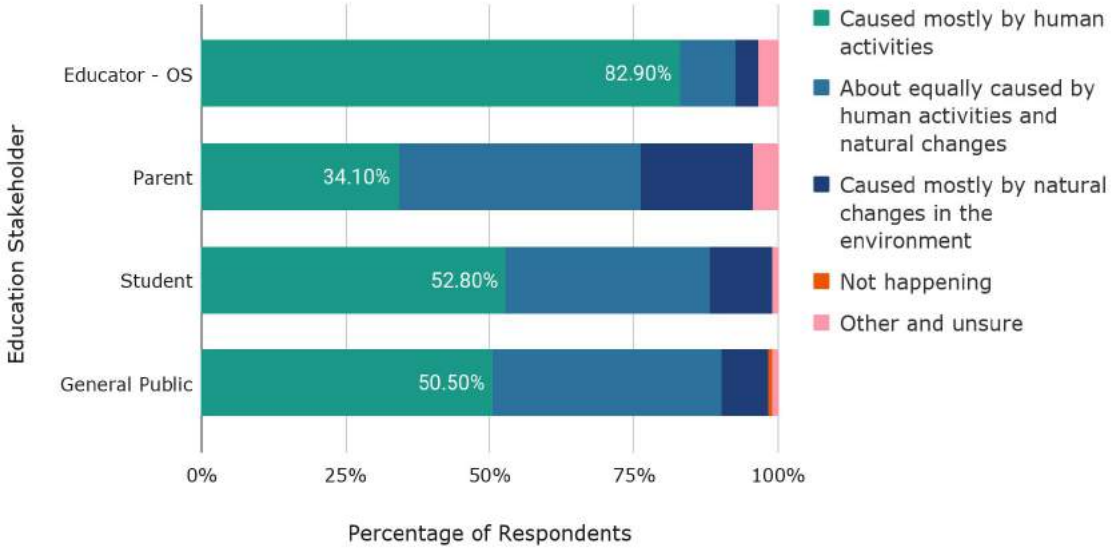
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

Do you think climate change is…

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

Do you think climate change is…

National

When asked early in the survey whether climate change is human-caused, open-sample educators agreed (78%) more than closed-sample educators (60%). Students agreed (54%) more than both members of the general public (46%) and parents (43%).

Provincial

The understanding and acceptance that climate change is anthropogenic or human-caused varies across regional jurisdictions. 47% of BC respondents accept climate change as anthropogenic whereas only 28% of Alberta respondents and 29% of Saskatchewan respondents accept this. A substantial percentage of respondents indicated that climate change is "about equally caused by human activities and natural changes" with percentages ranging from 34% in Quebec to 52% in Saskatchewan. Public education that prioritizes educating the public on the difference between natural changes in the climate and human-caused climate change is recommended to address this predominant misconception. Understanding that climate change is human-caused shifts across provinces with the following percentages: QC=57%, ATL=51%, BC= 47%, ON= 46%, AB=28%, and SK=29%.

British Columbia

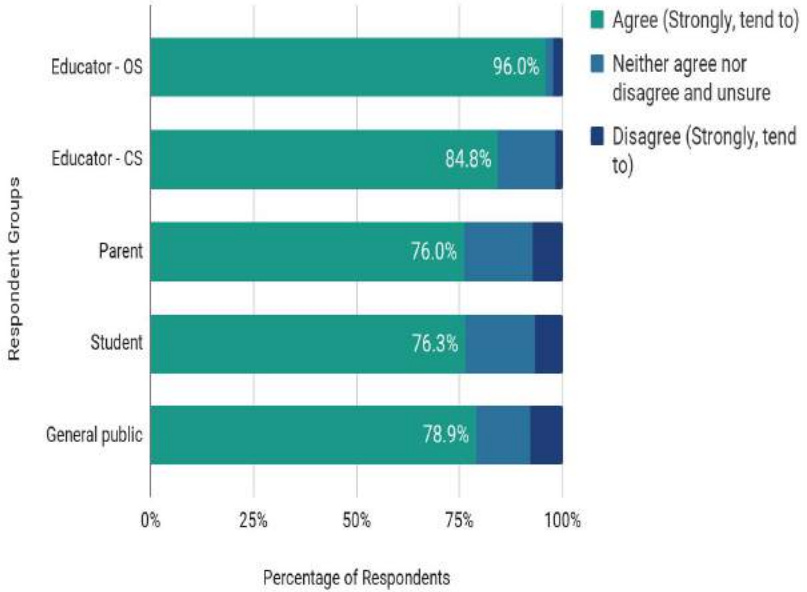
In BC there is variation in the belief that climate change is human caused. Educators have the largest percentage of respondents that believe climate change is caused mostly by human activities (83%). Just above half of the student (53%) and general public (50%) respondents are in agreement that it is mostly human-caused. BC Parents are lower than the national average (of 43%) with just over a third (34%) believing climate change is mostly human caused.

British Columbia to National Data Comparison

Results are similar to the national results in most categories with parent responding with less certainty than the national average.

I am concerned about the impacts of climate change

National Results



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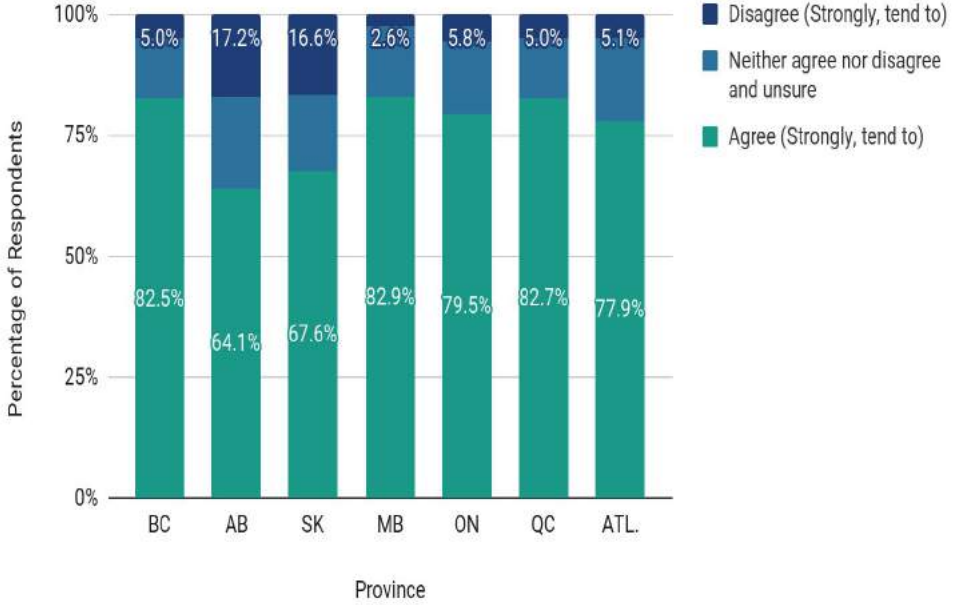
Provincial Results



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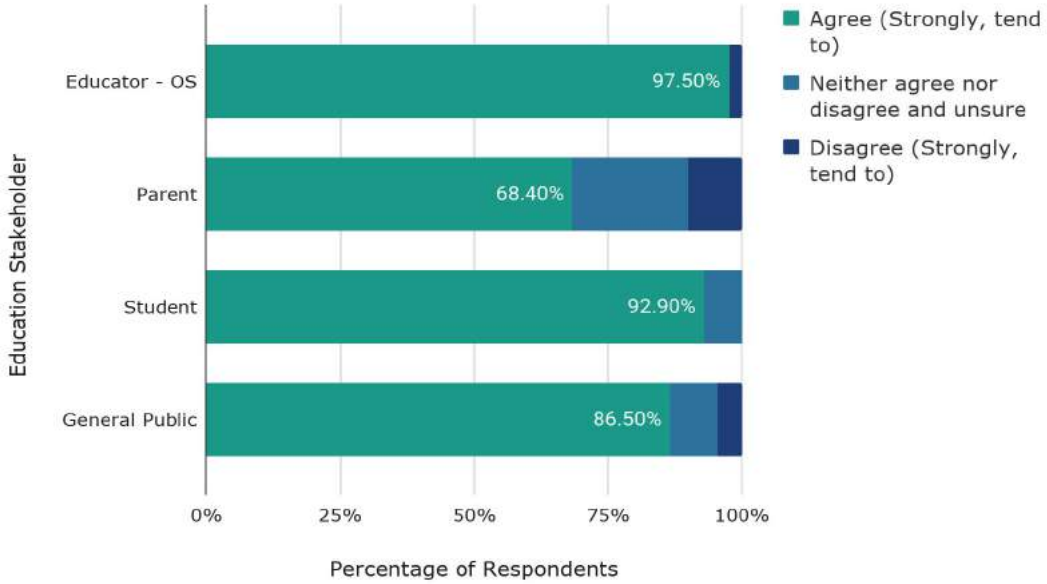
I am concerned about the impacts of climate change

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

I am concerned about the impacts of climate change

National Results
While the majority of Canadians (79% of members of the general public, 75% of students, and 75% of parents) are concerned about climate change, an overwhelming majority of educators are concerned (96% open-sample and 85% closed-sample).

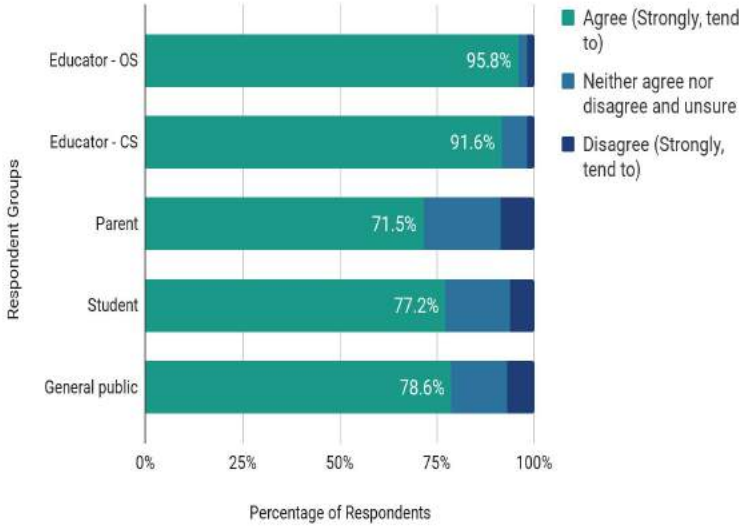
Provincial
Across the regions, Manitoba respondents most often expressed a high level of concern about the impacts of climate change (83%) while respondents from Alberta did so least often (64%). Still, across all regions, a large majority indicated that they are concerned.

British Columbia
Every respondent group in BC expressed a moderately high level of concern about the impacts of climate change. Educators reported the highest level of concern (98%), followed by students (93%), general public (86%), and parents reported being the least concerned (68%).

British Columbia to National Data Comparison
BC results are consistent with the national results with a slightly lower percentage of adults in BC compared to the national average. BC students level of concern was higher (93%) compared to the national level of student concern (76%).

There are risks to people in Canada from climate change

National Results



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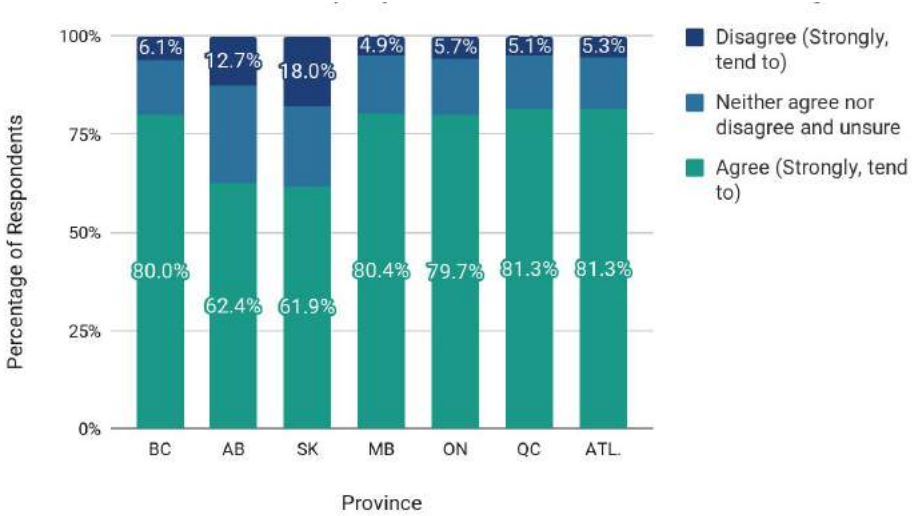
Provincial Results



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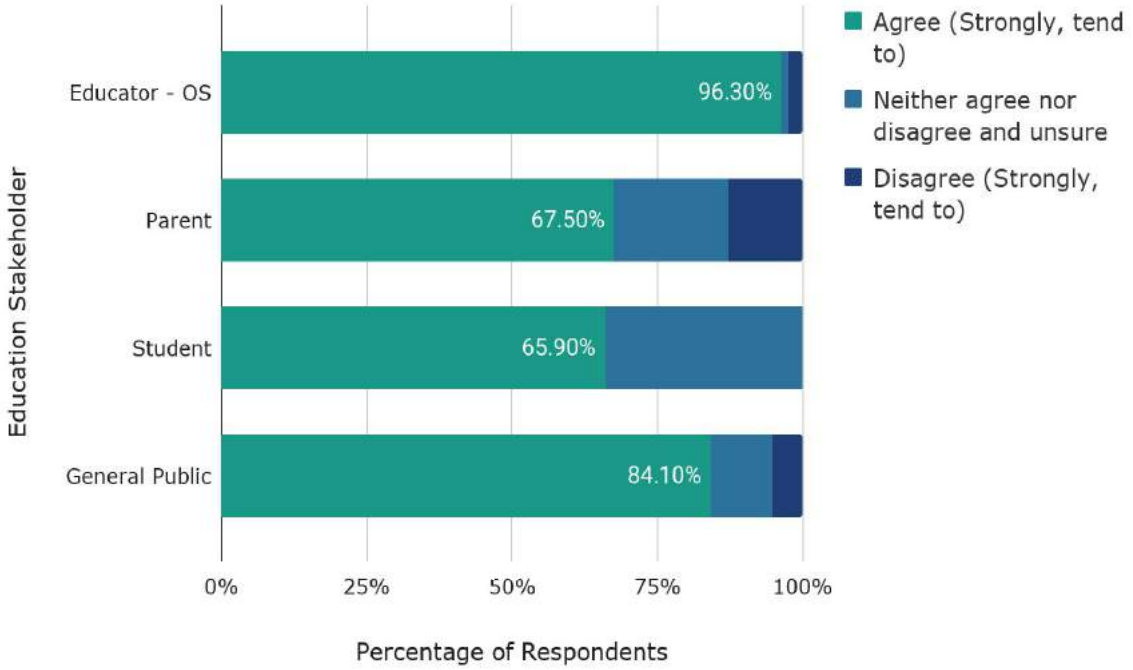
There are risks to people in Canada from climate change

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

There are risks to people in Canada from climate change.

National

There is high awareness that climate change poses a risk to Canadians with 96% of open-sample educators and 92% of closed-sample educators in agreement. Remaining respondent groups also demonstrated high awareness but to a lesser extent: 79% of members of the general public, 76% of students and 72% of parents.

Provincial

Among Canadians living in British Columbia, Manitoba, Ontario, Quebec, and the Atlantic provinces there is a widespread perception of risk that climate change is affecting, or will affect, Canadians (averaged across provinces = 80%) whereas only 62% of respondents from Alberta and 62% of respondents from Saskatchewan perceive that climate change poses risks to Canadians.

British Columbia

BC respondents consistently agree that climate change poses a risk to Canadians. Educators demonstrated the highest awareness with (97 %) strongly or tending to agree that there are risks. Remaining respondent groups generally agreed as well; (84%) of the general public, (68%) of parents and a slightly lower level of agreement was reported by students (66%).

British Columbia to National Data Comparison

Results in BC remain fairly consistent with national results for most groups with a lower level of students responding (agree, tend to) than the national respondents.

Knowledge, Understanding & Information

List of 10 Climate Knowledge Questions and Answers

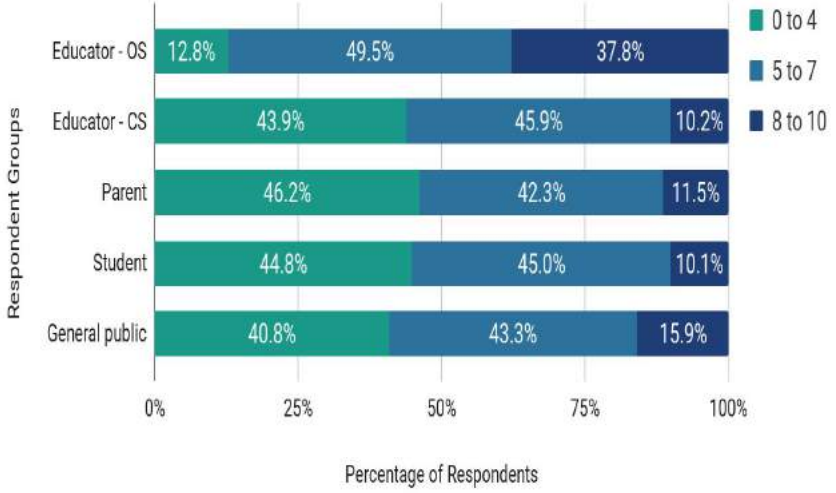
1. Do you think climate change is…	**Caused mostly by human activities** Caused mostly by natural changes in the environment About equally caused by both human activities and natural changes Not happening Other (please specify) Unsure
2. Which comes closest to your own view?	**Most climate scientists think climate change is happening** Most climate scientists do not think climate change is happening There is a lot of disagreement among climate scientists about whether Climate change is happening or not Don't know enough to say
3. To the best of your knowledge, climate change is mostly caused by...	**Carbon dioxide and other greenhouse gases** Emissions from nuclear power plants Thinning of the ozone layer Particulate air pollution Industrial chemicals Natural variability Climate change is not happening Unsure

4. To the best of your knowledge, the main process behind climate change is…	**An increase in gasses in the Earth's atmosphere that trap heat** Letting more of the sun's heat into the Earth's atmosphere through a thinner ozone layer An increase in solar activity Particle pollution in the air reflecting heat back to Earth Climate change is not happening Unsure
5. To the best of your knowledge, Canada's average temperature has … since 1948.	**Increased by 1 – 1.5 degrees Celsius** Increased by 0.5 – 0.99 degrees Celsius Increased by 0 – 0.49 degrees Celsius Decreased by 1 – 1.5 degrees Celsius Decreased by 0.5-0.99 degrees Celsius Decreased by 0-0.49 degrees Celsius Stayed the same Unsure
6. To the best of your knowledge, in Canada (between 1990 – 2015), what sector was the largest greenhouse gas emitter?	**Oil and gas** **Transportation** Agriculture Heavy industry Electricity Buildings Waste Unsure

7. To the best of your knowledge, Canada, as an Arctic nation, is more affected by the impacts of climate change	**True** False Unsure
8. To the best of your knowledge, in the next 20 years Canadian winters are predicted to be colder and to have more snow.	True **False** Unsure
9. Scientists predict that the amount of temperature increase the Earth system can tolerate is...	Select all that apply: **0-0.49 degrees Celsius** **0.5 – 0.99 degrees Celsius** **1.0 – 1.49 degrees Celsius** **1.5 – 1.99 degrees Celsius** 2.0 – 2.49 degrees Celsius 2.5 – 3.0 degrees Celsius Unsure
10. What do the world's countries need to do in order to ensure temperatures stay within the range that the Earth system can tolerate?	Select all that apply: **Significantly decrease emissions** **Move to net zero emissions (balancing a measured amount of carbon released with an equivalent amount of sequestered or offset carbon emissions)** Significantly increase emissions Moderately Increase emissions Do nothing Moderately decrease emissions

Number of correct responses to 10 climate knowledge questions.

National Results



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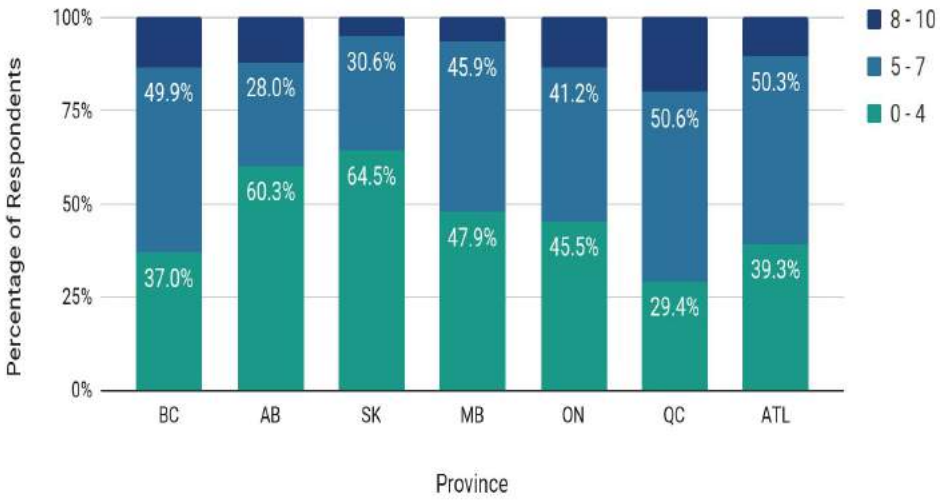
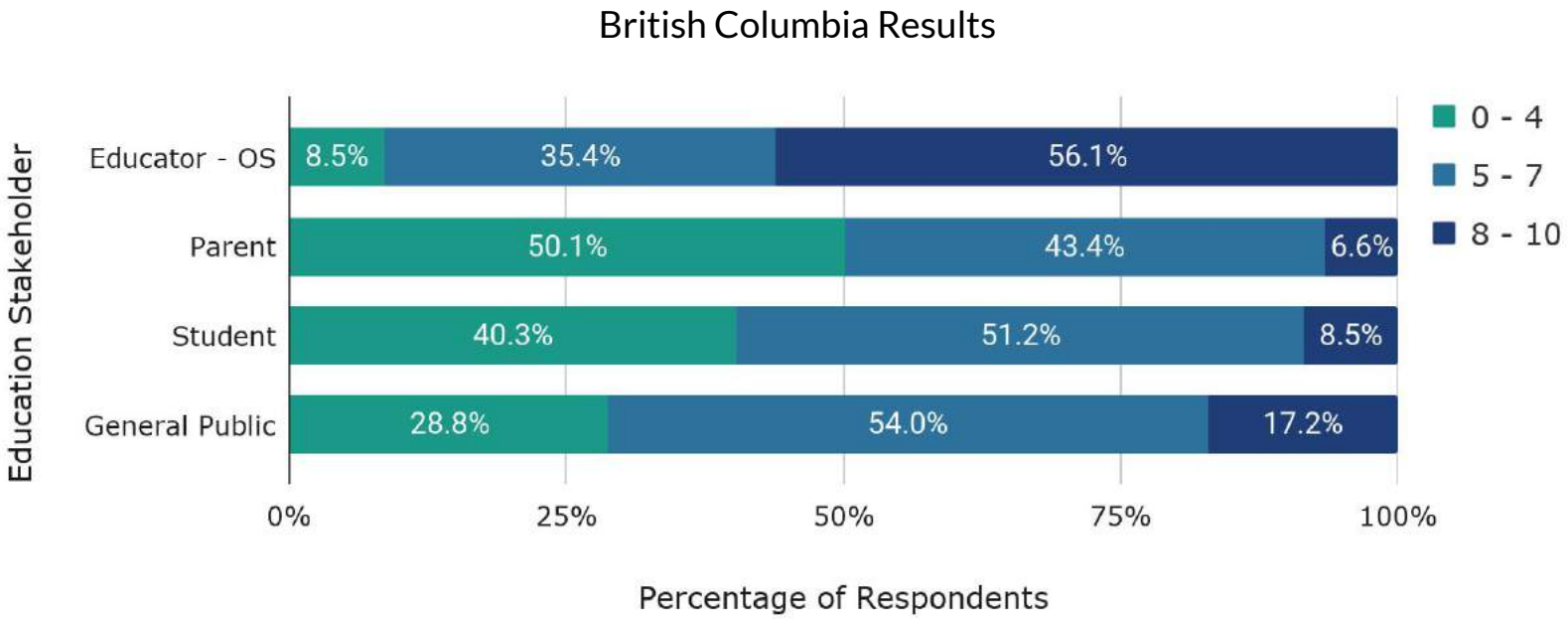
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

Number of correct responses to 10 climate knowledge questions.



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

Number of correct responses to 10 climate knowledge questions.

National

On average, 43% of parents, students, and closed-sample educators answered 4 or fewer of the knowledge questions correctly: closed-sample educators (44%), parents (46%), students (45%), and the general public (41%). 12% of the open-sample educators answered 4 or fewer questions correctly. On average, 14% of closed-sample respondents correctly answered 8 or more of the 10 climate change knowledge questions: closed-sample educators (10%), parents (12%), students (10%), and members of the general public (16%). There is a gap between open-sample educators and the other groups, with 37% of open-sample educators getting 8 or more of the 10 questions correct.

Provincial

Regionally, the percentage of respondents answering four or fewer correctly is as follows: BC =37%, AB=61%, SK=65%, MB= 48%, ON= 46%, QB= 29% and AL=39%. QC scored the highest with 20% of respondents getting 8 to 10 correct and SK scored lowest with 5% of respondents getting 8 to 10 correct.

Number of correct responses to 10 climate knowledge questions.

British Columbia

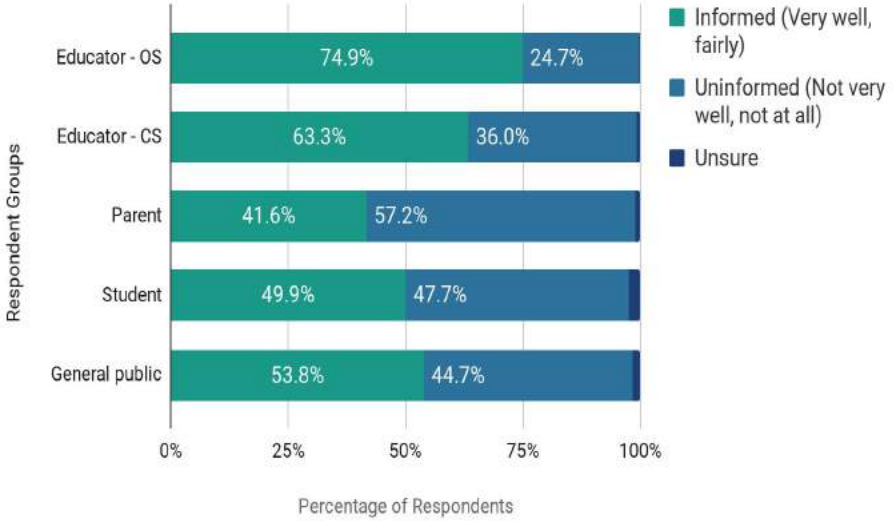
The BC responses follow a similar pattern to the National results with educator's having the highest percentage of respondents answering 8-10 questions correctly (56%). The next highest percentage of respondents able to correctly answer at least 8 questions correctly was the general public at (17%), followed by (9%) of students, and the least successful respondent group in BC was parents with only (7%).

British Columbia to National Data Comparison:

Higher percentages of parents (43%), students (51%) and members of the general public (54%) in BC answered 5-7 responses correctly than in the national results. A much higher percentage of BC educators (56%) answered 8-10 responses correctly than educators in the national results (38%).

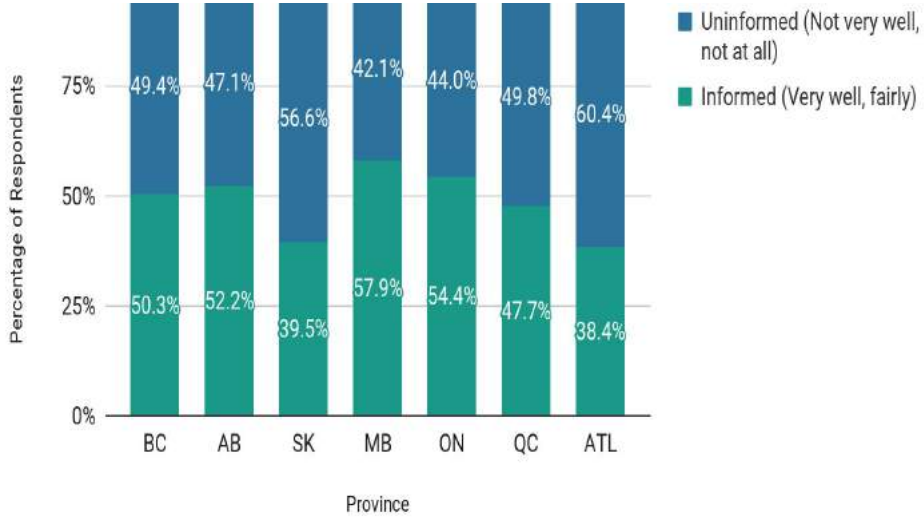
Personally, how well-informed do you feel you are about climate change?

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

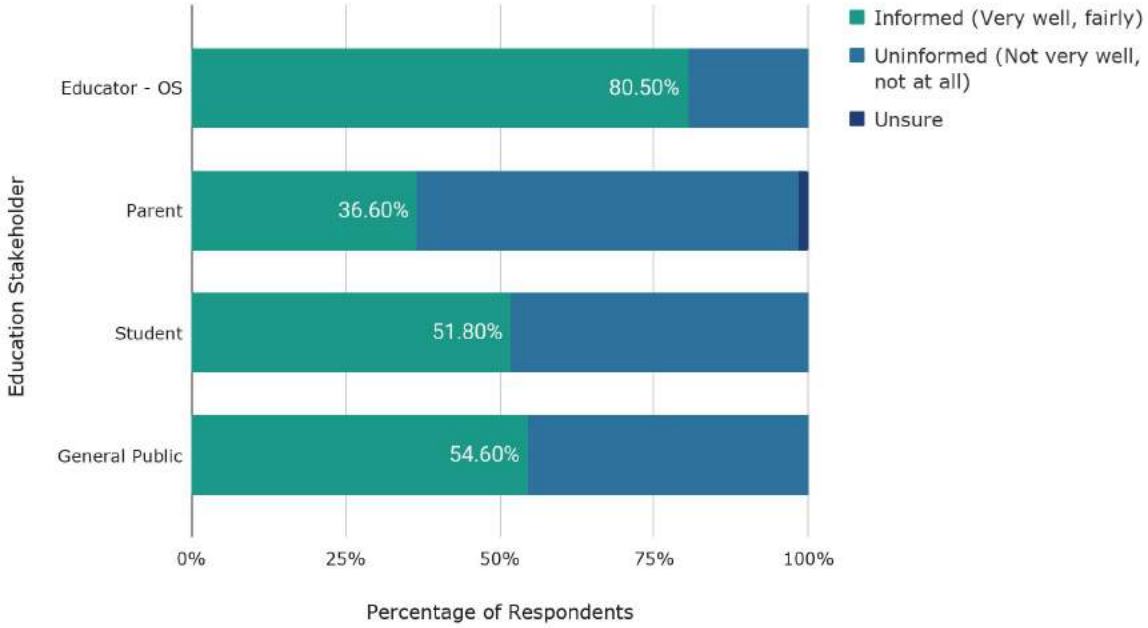
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

Personally, how well-informed do you feel you are about climate change?

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

Personally, how well-informed do you feel you are about climate change?

National

When asked, “how well informed do you feel you are about climate change?”, those who indicated “very well” or “fairly well” include: open-sample educators (75%), closed-sample educators (63%), parents (42%), students (50%), and the general public (54%).

Provincial

Regional responses for those feeling “very well” or “fairly well” informed about climate change are as follows: BC=50%, AB= 52%, SK= 40%, MB= 58%, ON= 54%, QC= 48% and ATL=38%.

British Columbia

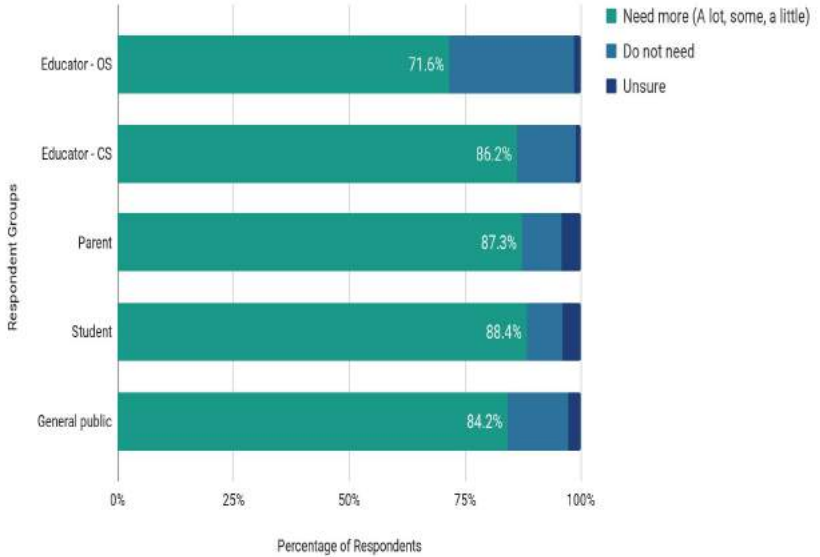
When responding to the question: “how well informed do you feel you are about climate change?” Educators reported feeling the most informed, with 81% of respondents. Slightly more than half of the the students (52%) and general public slightly higher (55%) reported feeling well-informed. Parents reported the lowest level at 37%

British Columbia to National Data Comparison

BC results followed a similar pattern as the national results, with parents reporting feeling the least informed, and educators reporting feeling the most informed. The main differences include: parents who report feeling well-informed is slightly lower in BC (37%) compared to the national results (42%).

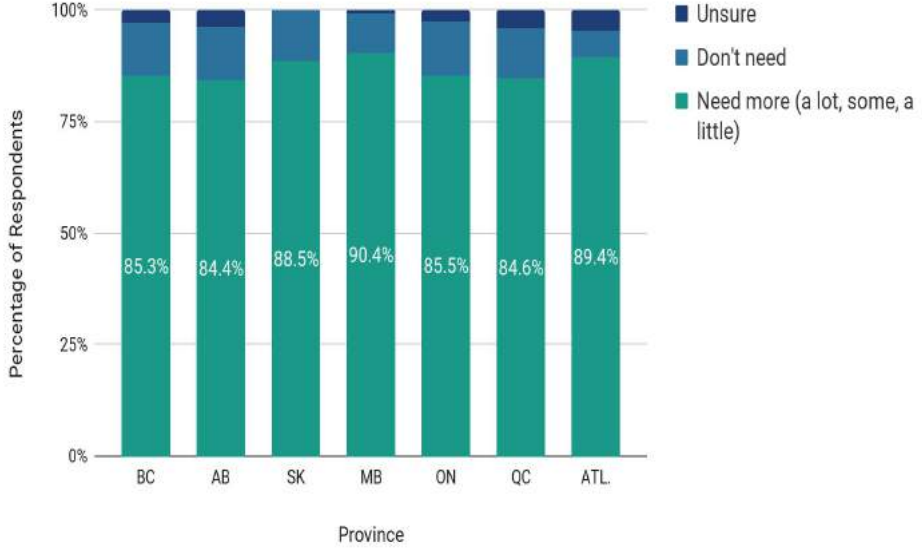
On some issues, people feel they have all the information they need in order to form a firm opinion, while on other issues they would like more information before making up their mind. For climate change, where would you place yourself?

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

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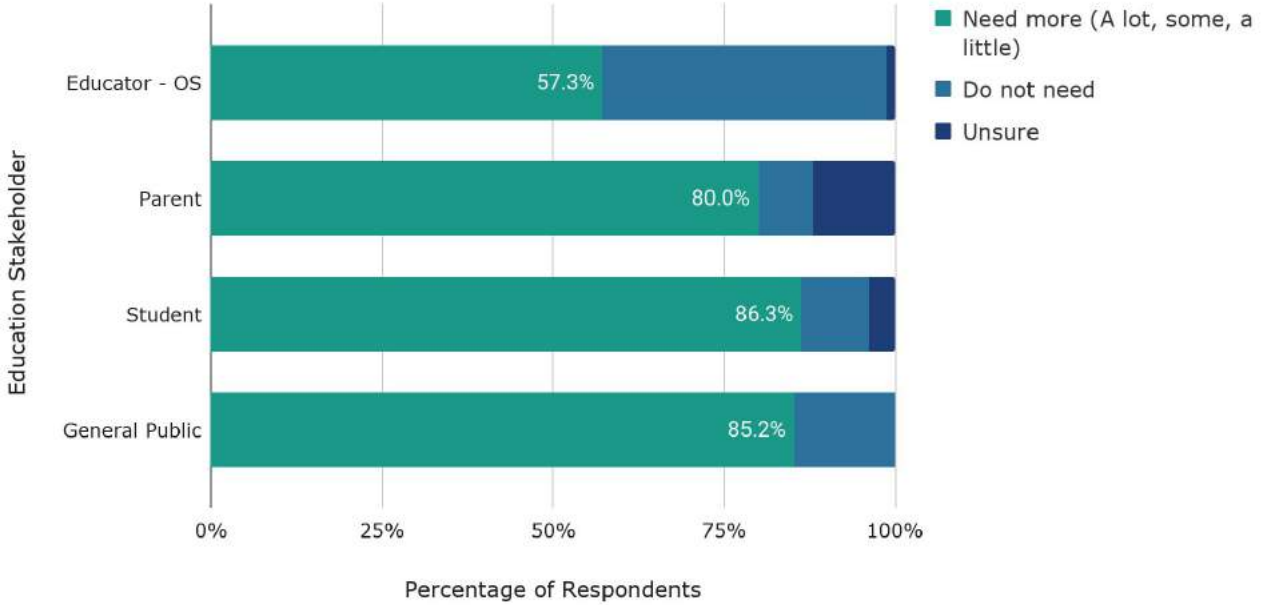
British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

On some issues, people feel they have all the information they need in order to form a firm opinion, while on other issues they would like more information before making up their mind. For climate change, where would you place yourself?

National

Most respondents in all groups indicated that more information on climate change is required for them to form a firm opinion on climate change. The smallest percentage of respondents indicating the need for additional information were open-sample educators (72%), while others were nearly unanimous on the need for more information: 88% of students, 87% of parents, 86% of closed-sample educators, and 84% of members of the general public. We interpret this result as meaning almost everyone would benefit from more information about climate change and believe these data support the need for increased public education and professional development for teachers on climate change education.

Provincial

Across the provinces, 87% of Canadians on average identified that they need more information in order to form a firm opinion on climate change.

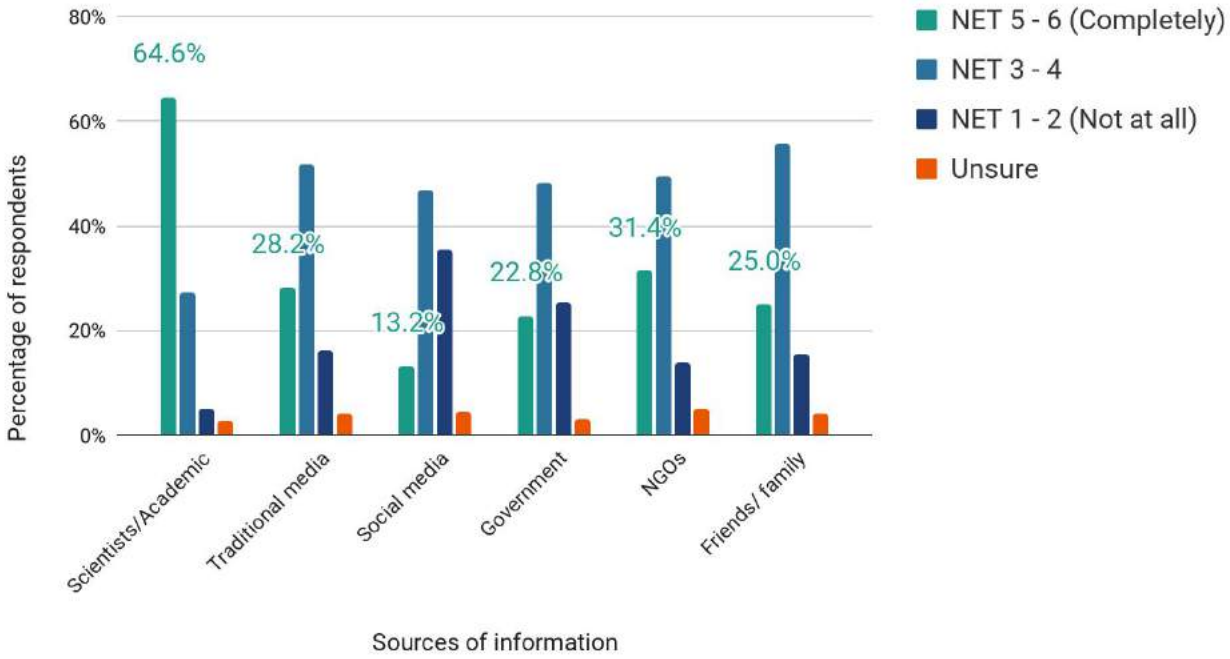
British Columbia

Consistently across respondent groups in BC they report needing more information to form an opinion on climate change. 86% of students, 85% of the general public, 80% of parents and 57.3% of educators report needing more information.

British Columbia to National Data Comparison:

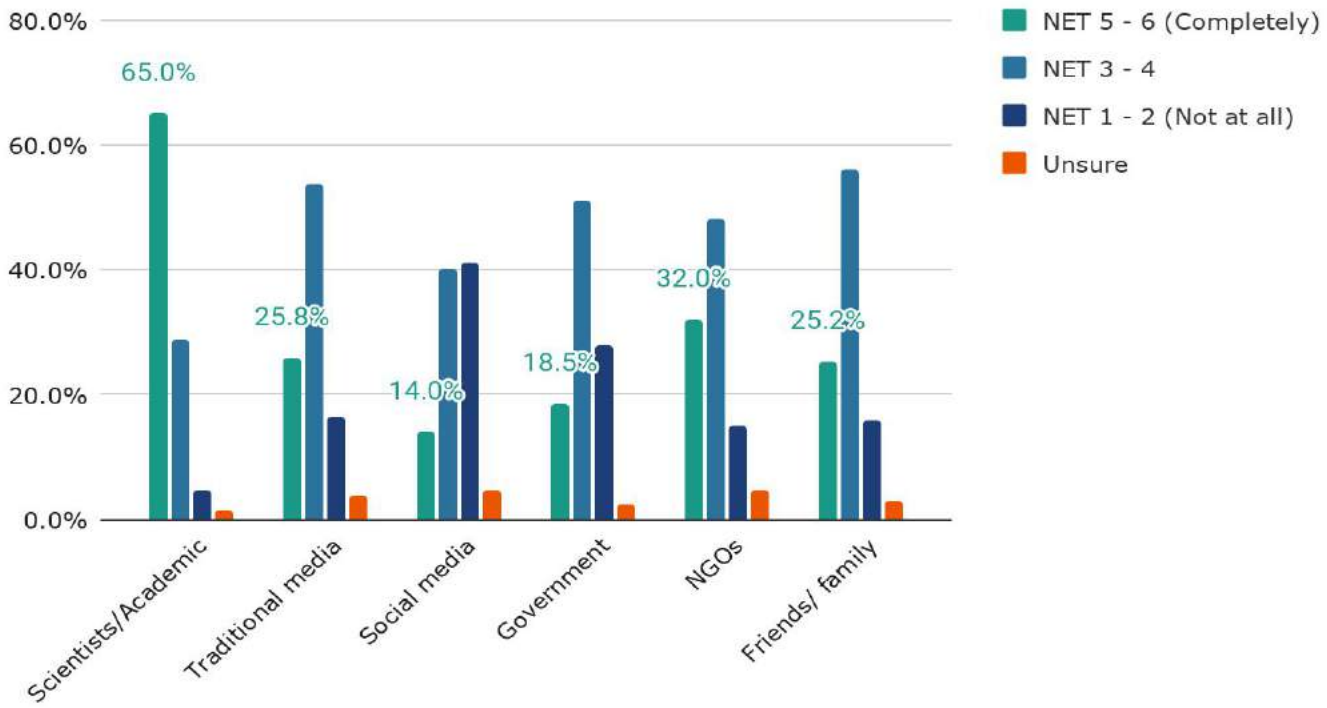
Similar responses: Canadians need more information. In BC 57% of Educators - OS reported wanting more information whereas nationally 72% of Educators - OS indicated wanting more information.

National - Trust in different sources of information



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908) [aggregated]

British Columbia - Trust in different sources of information



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117) [aggregated]

Trust in different sources of information

National

When asked which sources of climate change information respondents trust the most, 65% of closed-sample respondents indicated scientists/academics; 31% indicated non-governmental organizations, 28% indicated traditional media, 25% friends/family and 23% indicated government.

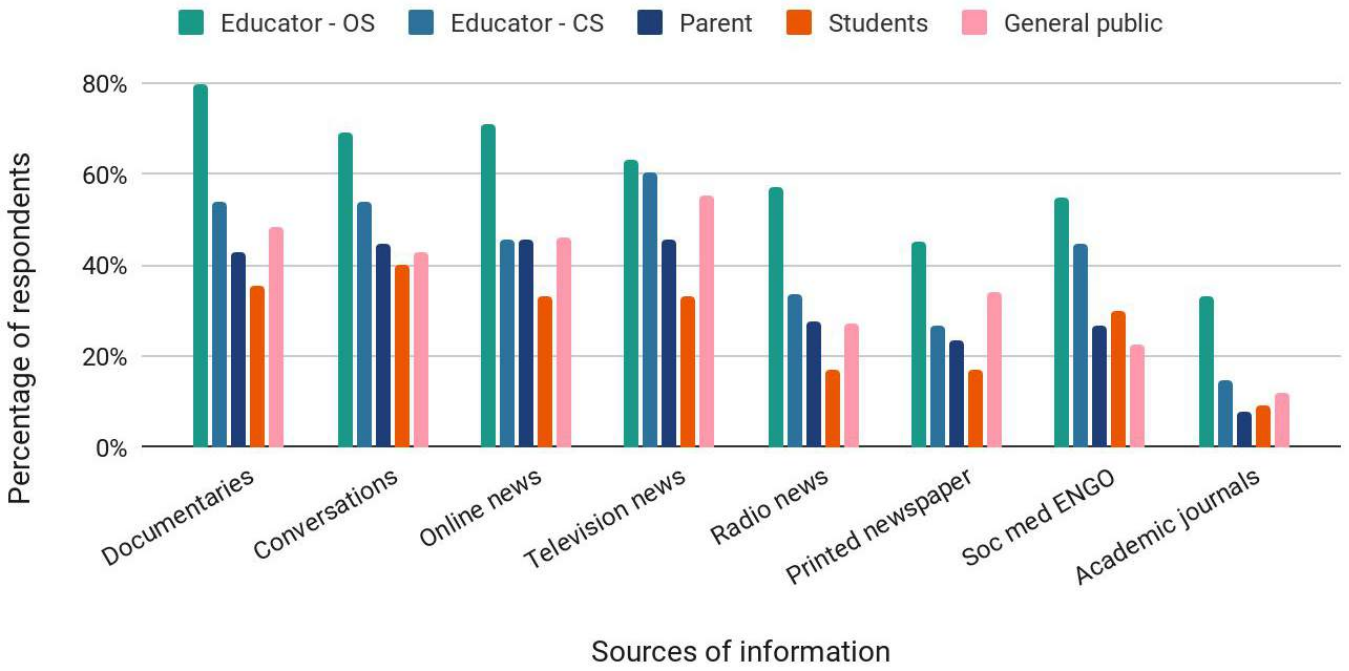
British Columbia

By far the most trusted source for information regarding climate change is scientists and academics (65%). Respondents in BC do not have a high degree of trust in many prevalent climate change information sources including: traditional media outlets, social media, government, NGO's or friends and family. After scientists and academics, respondents had the highest degree of trust in NGO's (32%), then traditional media (26 %), followed by friends and family (25%), and government (18%).

British Columbia to National Data Comparison:

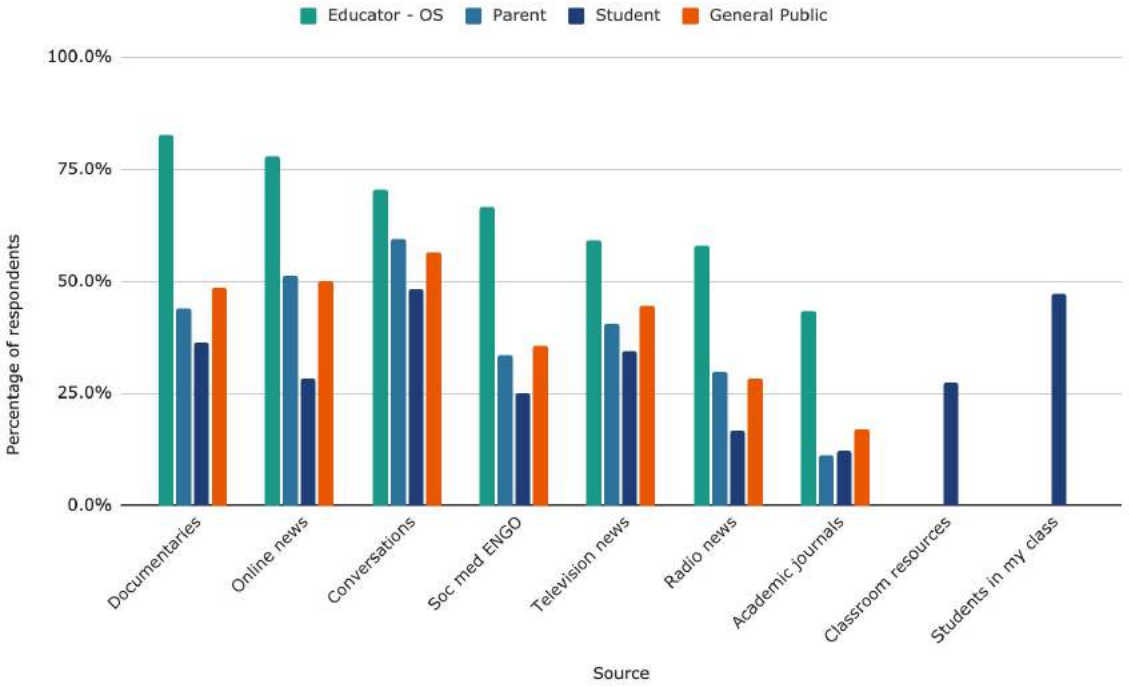
Trust in information sources in BC follows a very similar pattern to the national results: the most trusted source of climate change information is scientists and academics, and the least trusted source is social media.

National - Which of the following do you use to inform yourself about climate change?



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

British Columbia - Which of the following do you use to inform yourself about climate change?



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

Which of the following do you use to inform yourself about climate change?

National

The top four sources that people use to inform themselves about climate change include: documentaries, conversations with others, online news and television news. Although scientists and academics were noted as the most trusted source, academic journals are among the least cited by respondents as being used for climate change information. Respondent groups differed slightly, for instance, the highest percentage of the general public and closed sample educators selected television news as a source of information compared to the highest percentage of open-sample educators selected documentaries.

British Columbia

The top three sources that educators respondents in BC use to inform themselves about climate change are documentaries, conversations with others, and online news. Interestingly parents, students and the general public selected conversations most often. Similar to the national results, academic journals were not chosen often as sources of information, despite it being the most trusted source by far.

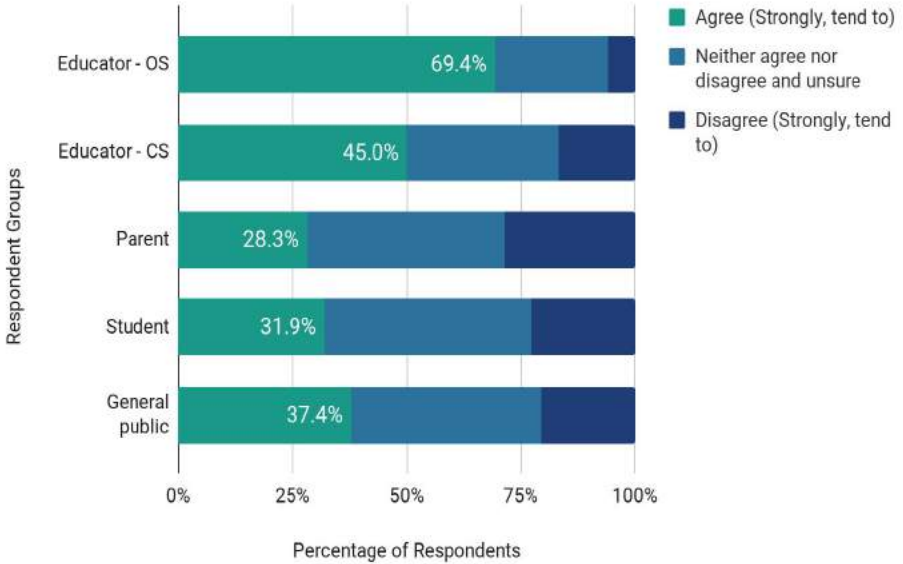
British Columbia to National Data Comparison:

Social media posts from environmental NGO are used more among BC respondents compared to the national results for all groups but students.

Impacts and Action

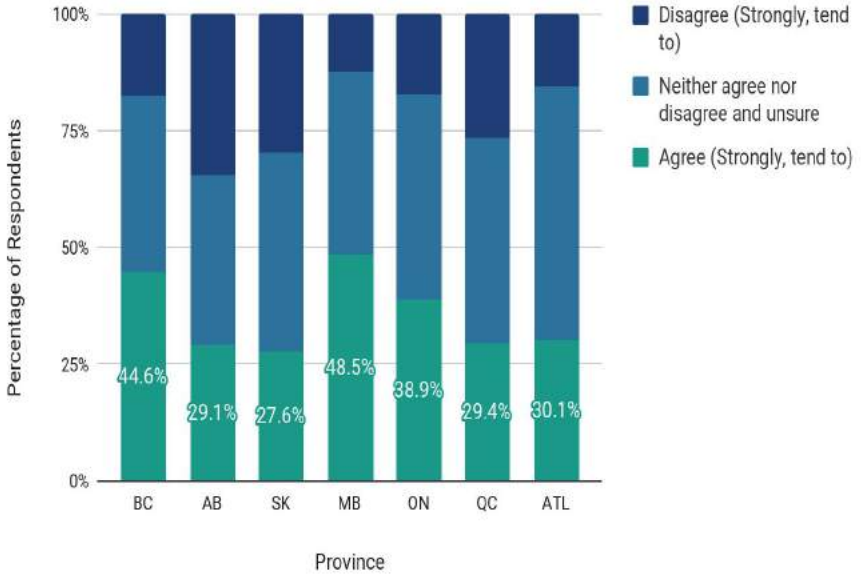
I have personally experienced the effects of climate change

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

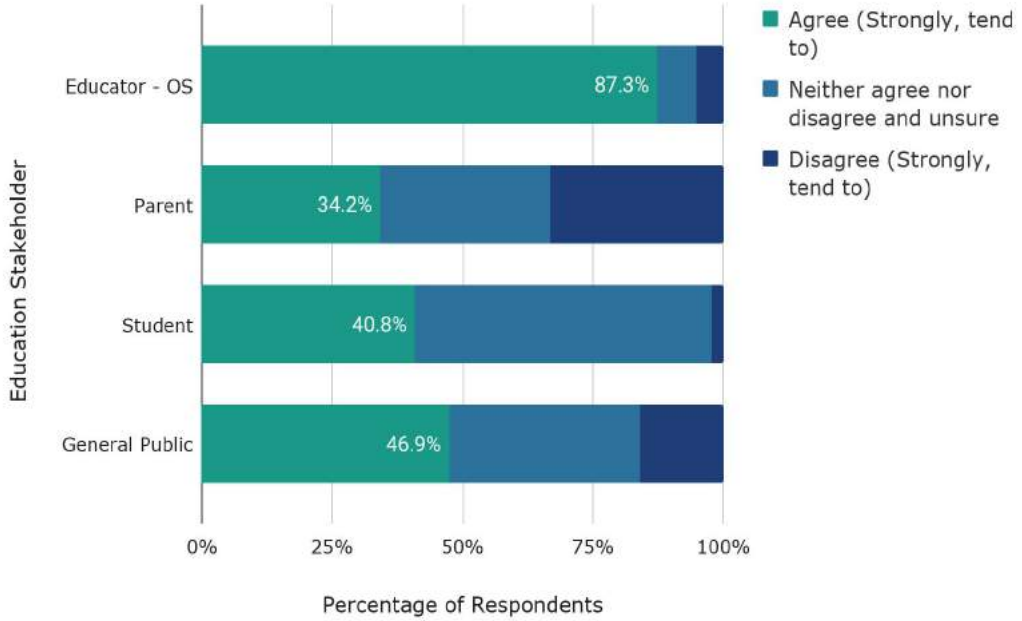
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

I have personally experienced the effects of climate change

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

I have personally experienced the effects of climate change

National

More than two-thirds (69%) of open-sample educators and just fewer than half (45%) of the closed-sample educators indicated that they had experienced climate change impacts. Comparatively, only one-third of the members of the general public (37%) and students (32%) indicated having personally experienced climate change impacts, with the fewest parents (28%) having experienced impacts.

Provincial

Regionally, with regards to having experienced the effects of climate change, BC and Manitoba had a significantly higher number of respondents who had personally felt climate impacts (45% and 48% respectively). In contrast, around one quarter of respondents in Saskatchewan (27%) reported experiencing the effects of climate change, and just slightly more in Alberta (29%) and Quebec (29%).

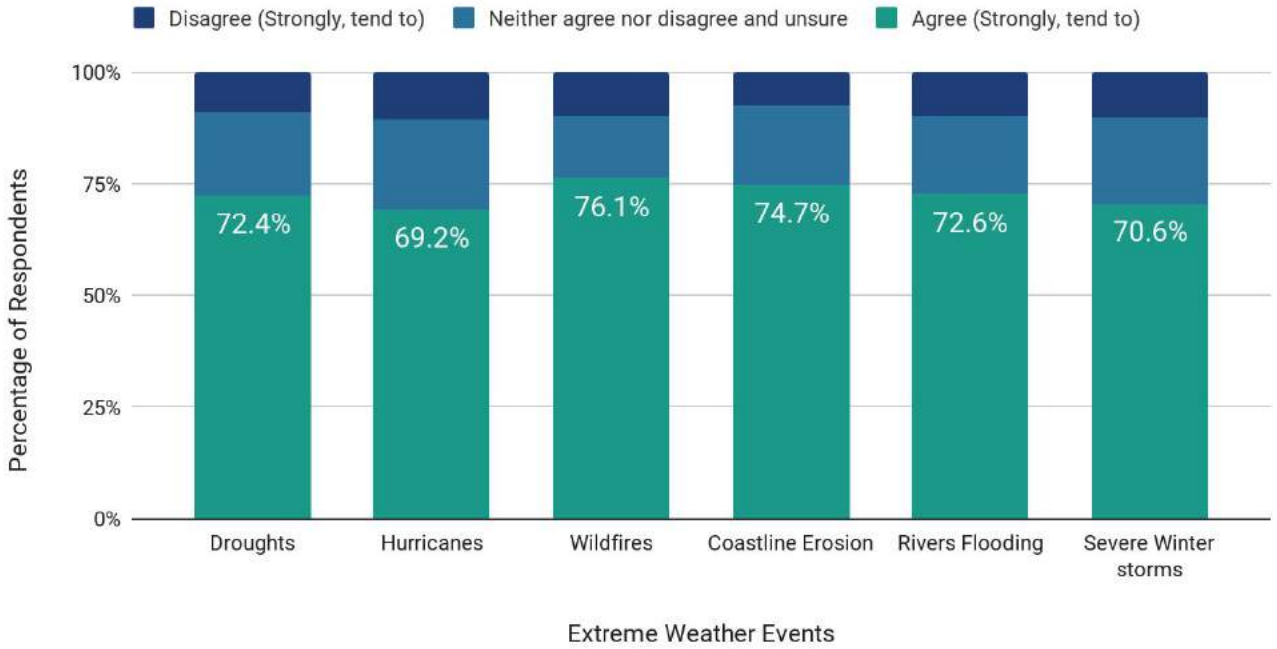
British Columbia

Open-sample educators reported having felt the effects of climate change more often than any other group by a margin of 41%, (87% of respondents who reported feeling the effects). 47% of general public agreed and only 41% of students, and 34% of parents agreed.

British Columbia to National Data Comparison

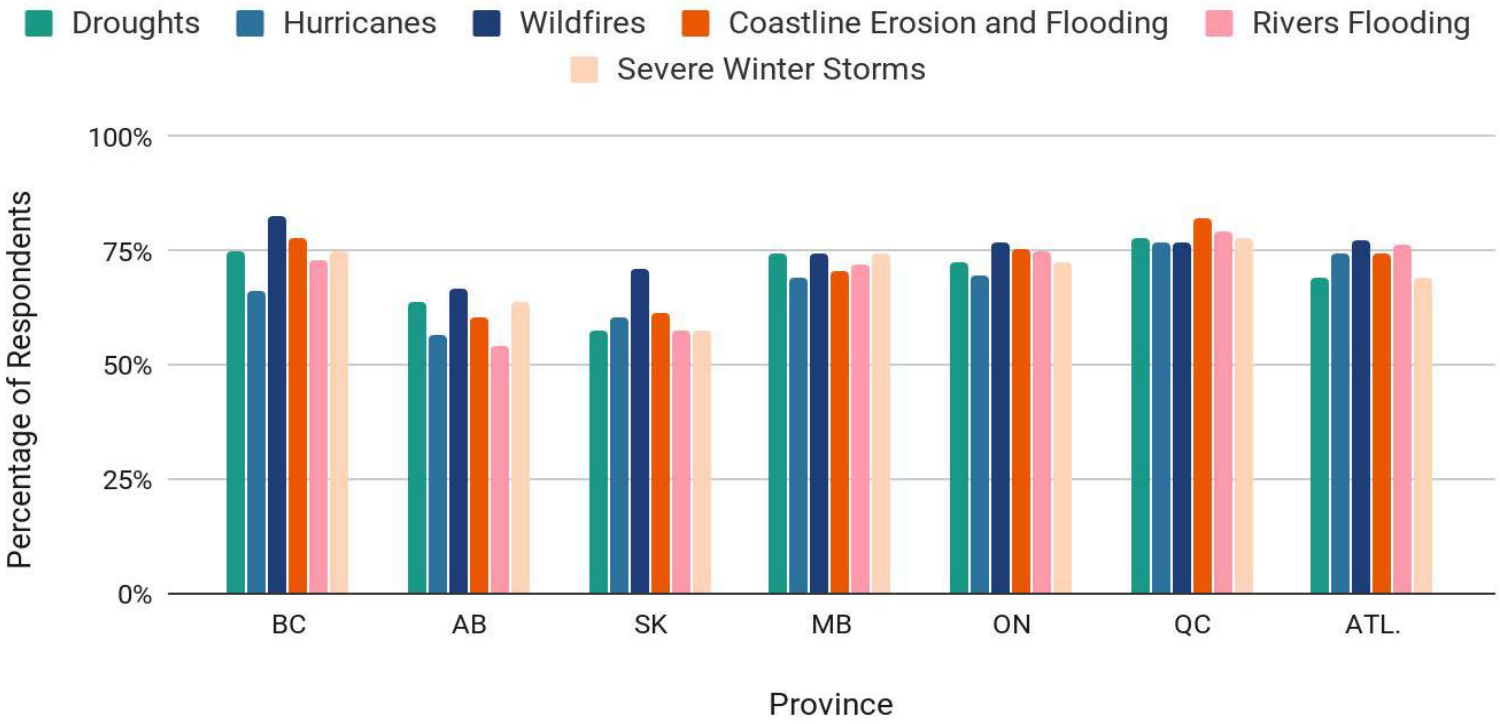
Results are similar to the national results, with open-sample educators reporting experiencing the effects more than any other group. Students in BC reported feeling the effects more often than the national results: 41% compared to 28% nationally.

National - Do you agree or disagree that climate change is already causing or making the following things worse: droughts, hurricanes, wildfires, coastline erosion, rivers flooding and severe winter storms?



n= 3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, General public CS = 908)

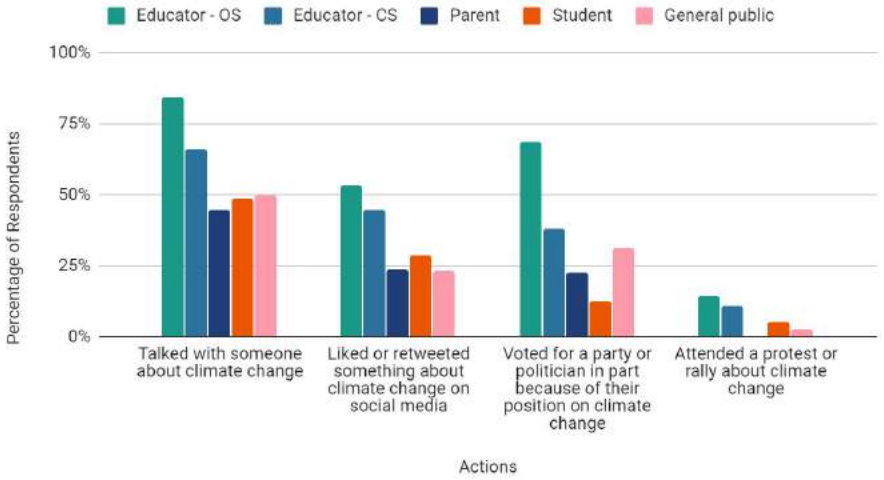
Provincial - Do you agree or disagree that climate change is already causing or making the following things worse: droughts, hurricanes, wildfires, coastline erosion, rivers flooding and severe winter storms?



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

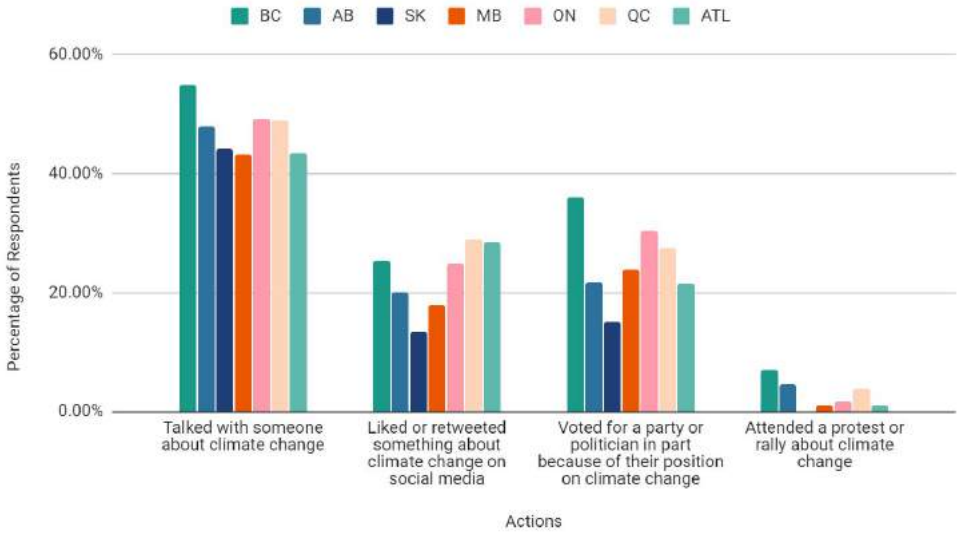
Actions taken to discuss or learn about climate change

National Results



n= 3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, General public CS = 908)

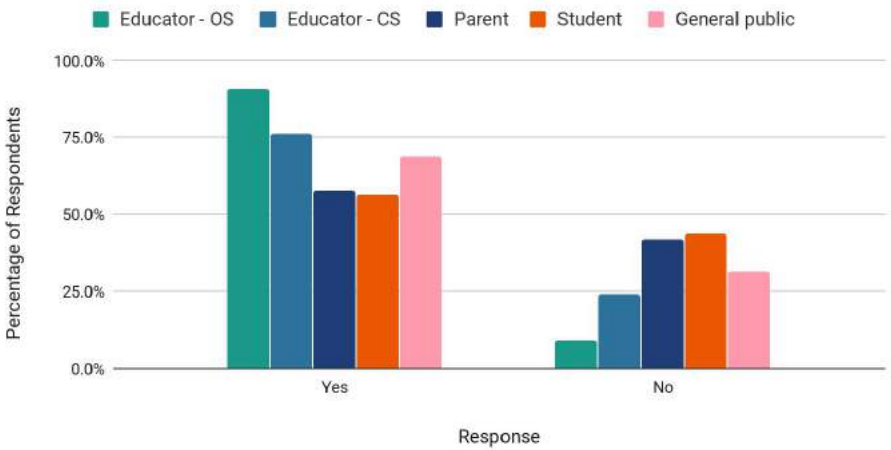
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

I have personally taken action to reduce greenhouse gas emissions

National Results



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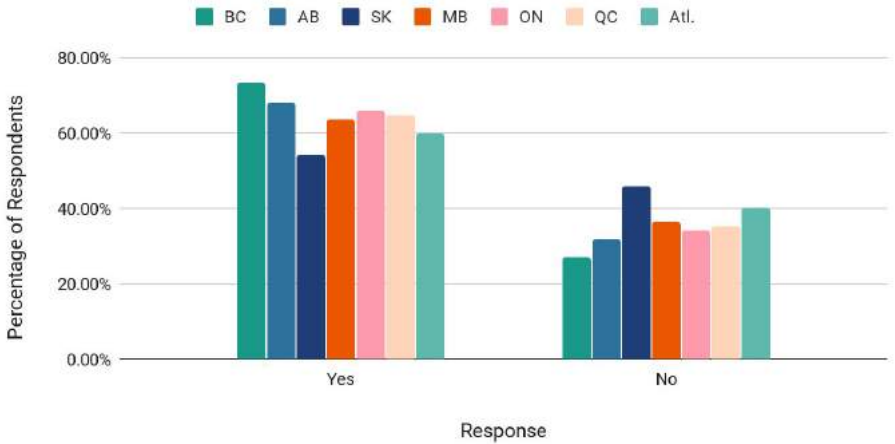
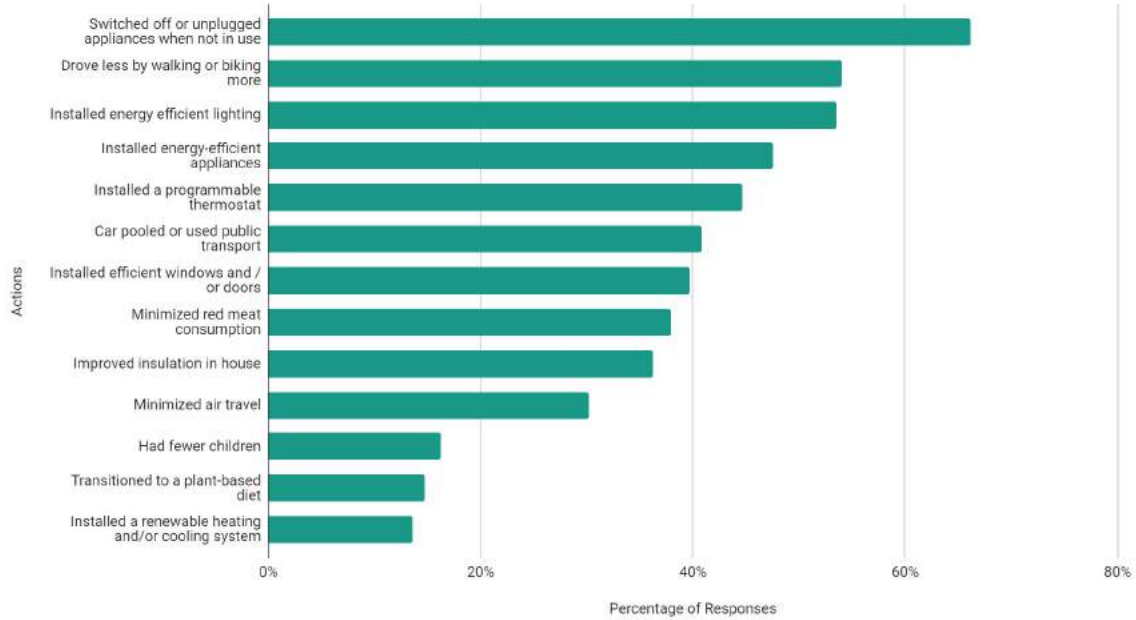
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

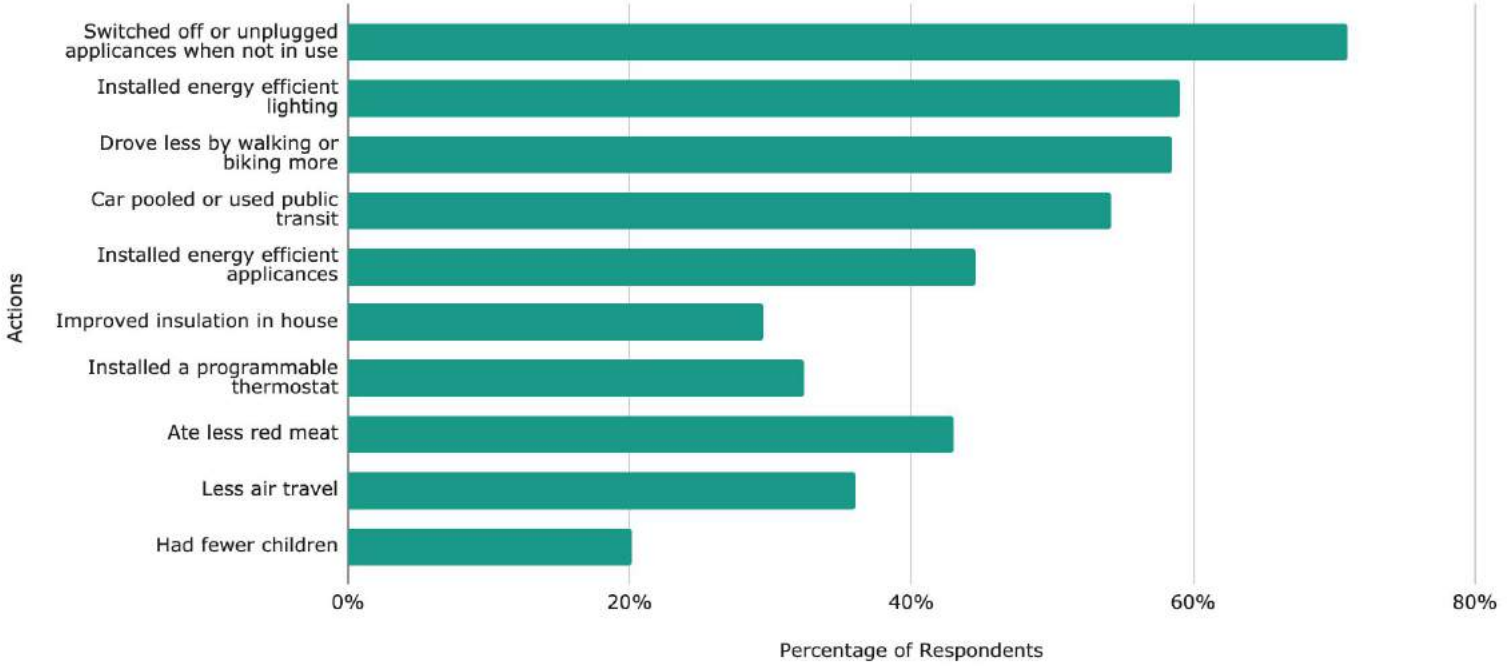
National - I have personally taken action to reduce greenhouse gas emissions



Note: Respondents could select all actions that applied. An average for each action is provided in order to create an order of actions. Across the groups there is variation in applicability of action.

n= 3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, General public CS = 908)

British Columbia - I have personally taken action to reduce greenhouse gas emissions



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117) aggregated

I have personally taken action to reduce greenhouse gas emissions

National

The top five actions reported nationally to reduce GHG's were: switched off or unplugged appliances when not in use, drove less by walking or biking more, installed energy efficient lighting, installed energy efficient appliances, and installed a programmable thermostat.

British Columbia

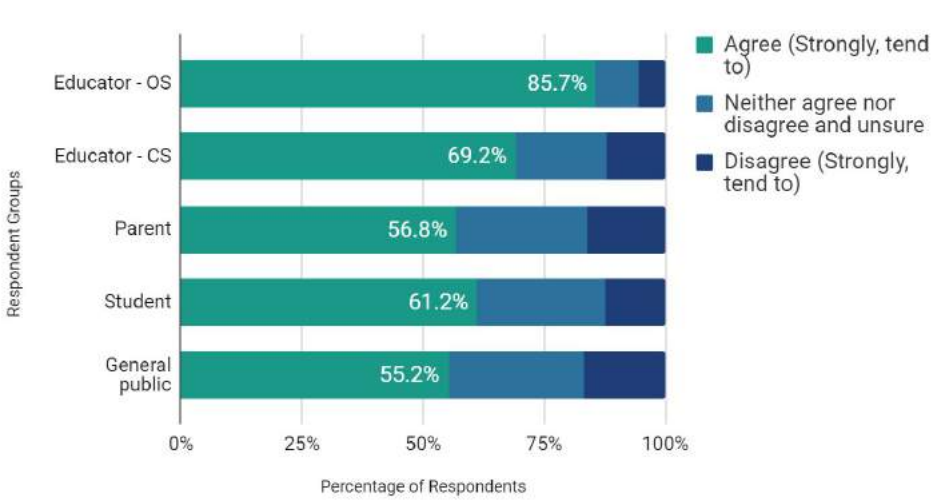
The top five actions reported by BC residences to reduce GHG's were: switched off or unplugged appliances when not in use, installed energy efficient lighting, drove less by walking or biking more, car pooled or used public transit, and installed energy efficient appliances.

British Columbia to National Data Comparison

Installed a programmable thermostat falls further down the list on the most selected actions in BC. Car pooled or used public transit was higher on the BC results compared to the national average where it did not make the top 5 results. The entire list of top selections however is fairly consistent between the BC and national results, with many overlapping actions.

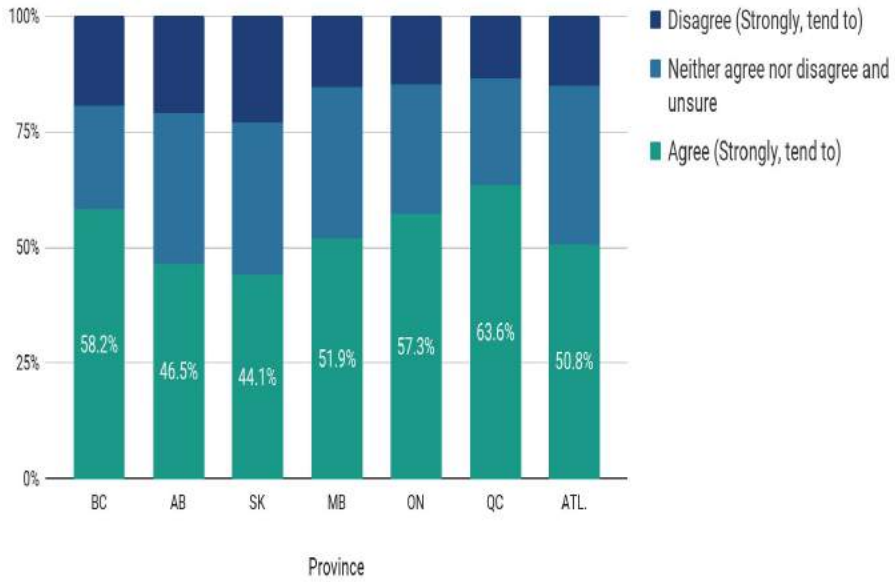
I believe my actions have an influence on climate change

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

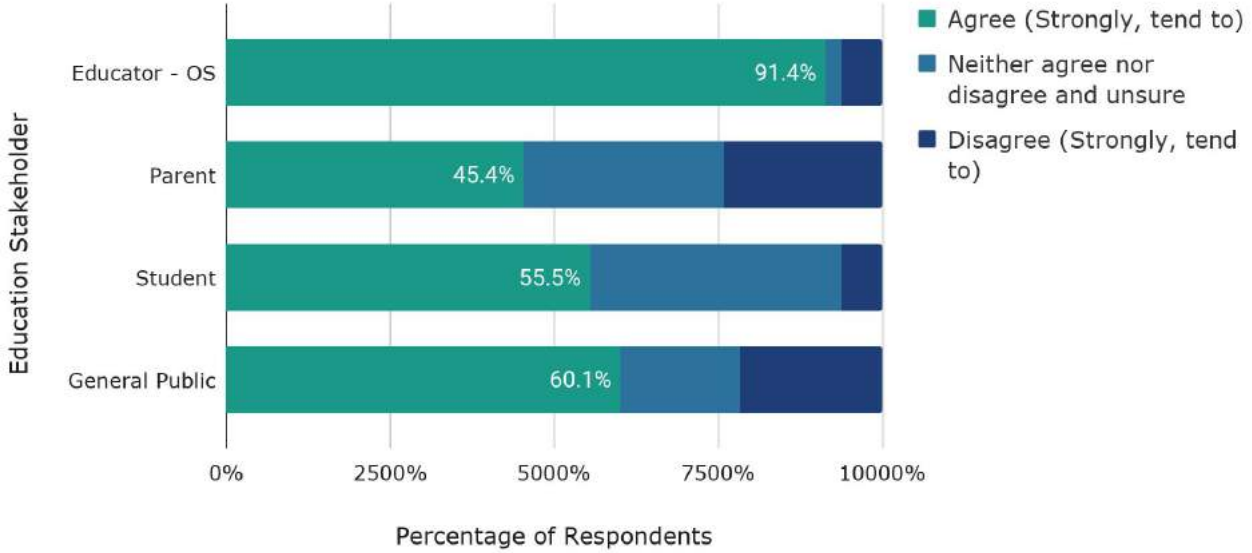
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

I believe my actions have an influence on climate change

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

I believe my actions have an influence on climate change

National

Respondent groups differed in their beliefs on the influence that personal actions have on climate change. While the majority of open-sample educators (86%) believed that personal actions influence climate impacts, only 69% of closed-sample educators felt similarly. Amongst the remaining respondents, students were in highest agreement with 61% of respondents, while just over half of parents (57%) and members of the general public (55%) believed the same.

Provincial

The belief that personal actions influence climate change varied from region to region. Less than half of respondents from Saskatchewan and Alberta believe that their actions are influential (44% and 47%, respectively), while almost two-thirds of respondents from Quebec (64%) reported believing that their personal actions could influence climate change.

British Columbia

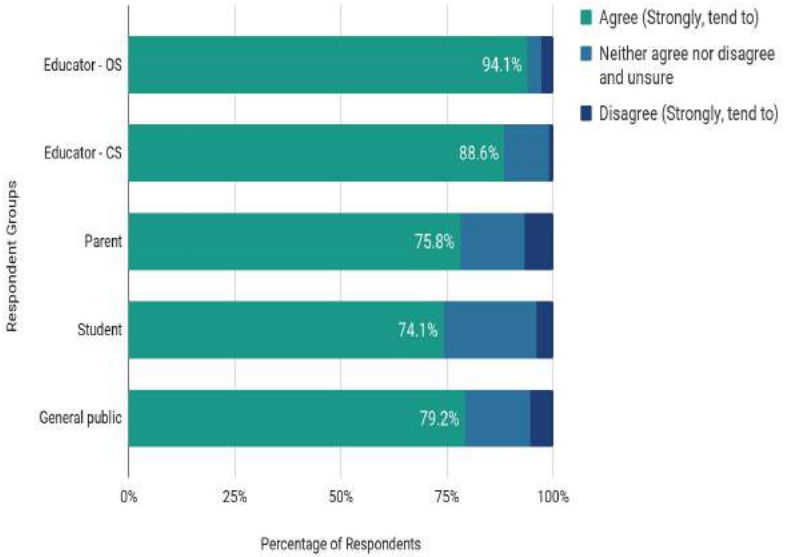
In BC, respondent groups varied in their belief that their actions do influence climate change. The highest percentage was open-sample educators that agreed that their actions have an influence (91%), and parents agreed least often (45%). Among the remaining respondent groups, 60% of the general public, and only 55% of students agreed that their actions have an influence.

British Columbia to National Data Comparison

Responses in BC follow a decrease response compared to the national results.

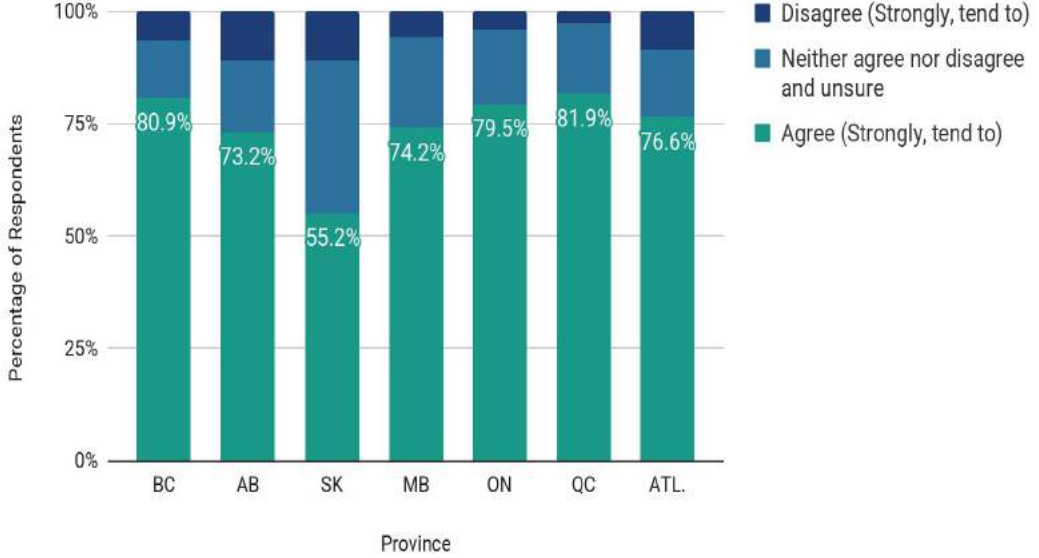
I understand personal actions are important but systemic change is required to address climate change challenges

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

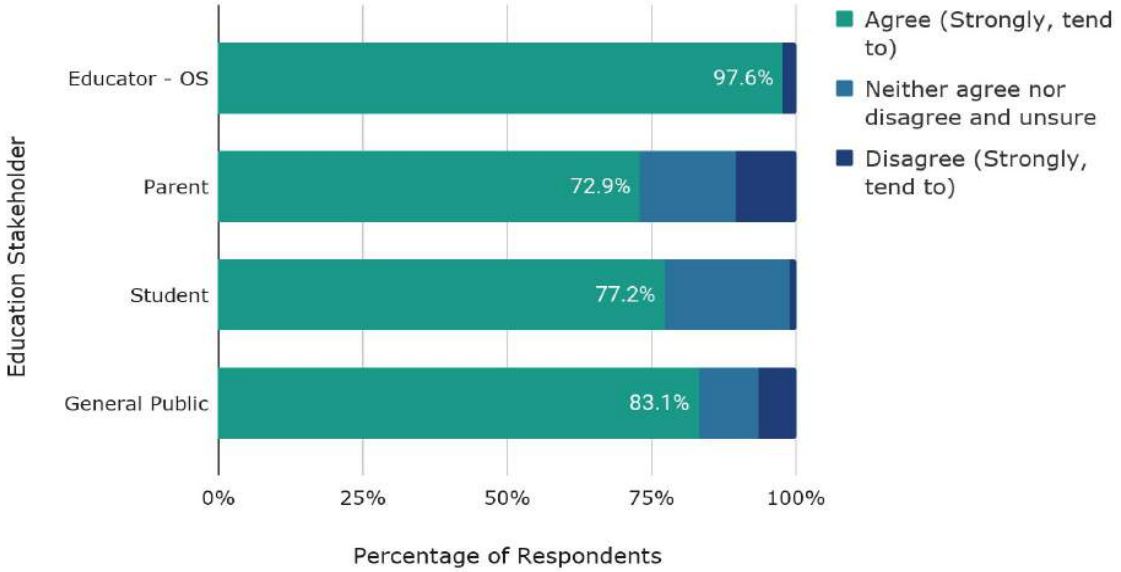
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

I understand personal actions are important but systemic change is required to address climate change challenges

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

I understand personal actions are important but systemic change is required to address climate change challenges.

National

A large majority in all respondent groups indicated that systemic change is required (in addition to personal actions) to address the challenges of climate change. Nearly all open-sample educators (94%) agreed with the need for systemic change, as well as the majority of closed-sample educators (89%). Approximately three-quarters of remaining respondent groups shared similar beliefs with members of the general public at 79%, parents at 76% and students at 74% agreement.

Provincial

In every region across the country, most respondents acknowledged that systemic change is required in order to address the challenges posed by climate change. Quebec (82%), closely followed by BC (81%) had the highest percentage of respondents agree that systemic change is required. Saskatchewan had significantly lower agreement, with only 55% of the respondents acknowledging that systematic change is a requirement to address climate change challenges.

British Columbia

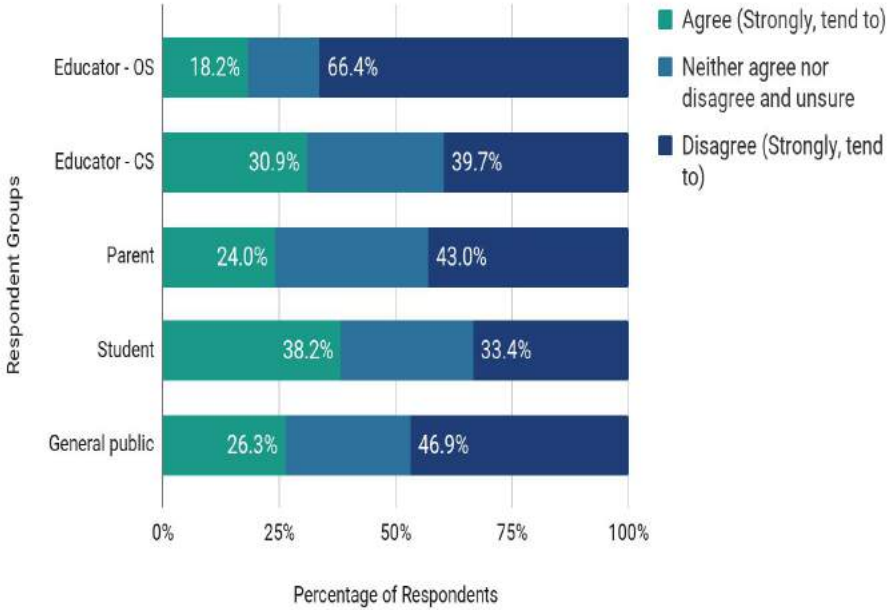
In BC the majority of educators (98%), students (77%), and members of the general public (83%) agreed that systematic change is required to address these challenges. The group of respondents that seemed to place the least importance on systematic change is parents with 73% agreeing.

British Columbia to National Data Comparison

Differences between BC and the national results are minimal, respondent groups generally agree that systematic change is a very important piece of the effort to solve climate change across the board.

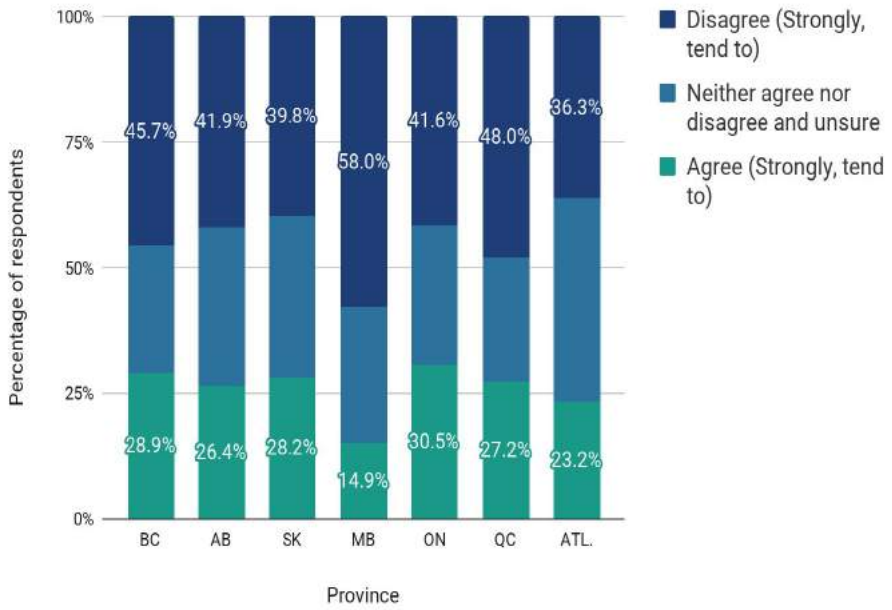
New technologies can solve climate change without individuals having to make big changes in their lives

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

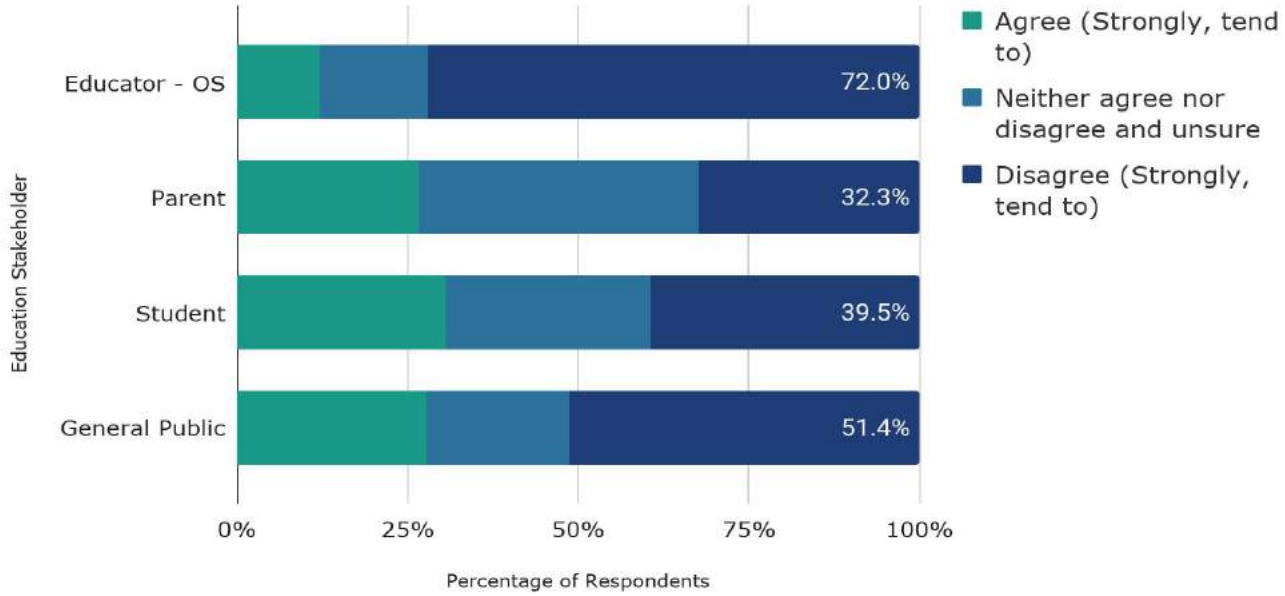
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

New technologies can solve climate change without individuals having to make big changes in their lives

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

New technologies can solve climate change without individuals having to make big changes in their lives

National

A large majority in all respondent groups indicated that new technologies cannot solve climate change without individuals having to make big changes in their lives. Only 18% of open-sample educators agreed that they could, 31% of closed-sample educators, 24% of parents, 38% of students and 26% of members of the general public.

Provincial

Overall, on average 26% of respondents across Canada believe that new technologies alone can solve climate change without individuals having to make big changes in their lives. Agreement is highest in Ontario (31%) Saskatchewan (28%) and lowest in Manitoba (15%)

British Columbia

In BC, all groups disagree more than agree with the statement. Educators, students and the general public disagree with the statement with educators respondents responding the most (72%). Parents were the only group responding neither agree nor disagree and unsure (32%) the most.

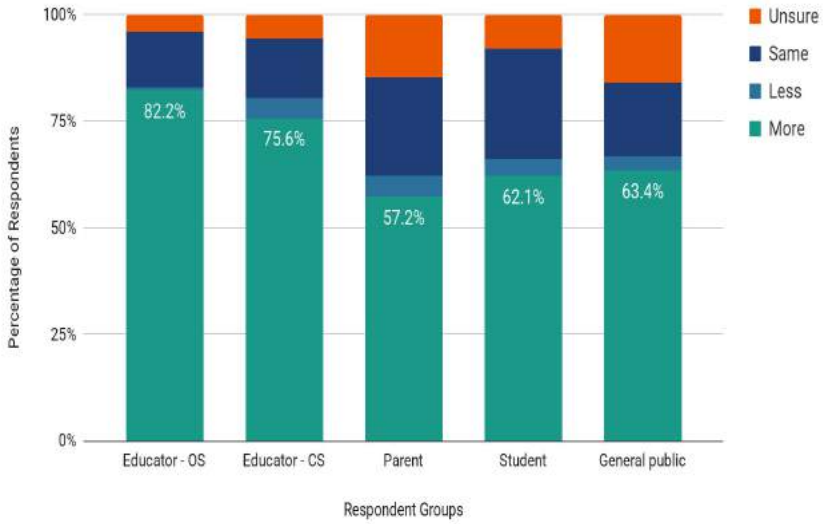
British Columbia to National Data Comparison

National and BC results follow a similar pattern with the exclusion of parents choosing the statement neither agree nor disagree and unsure the most.

Climate Change & The Education System

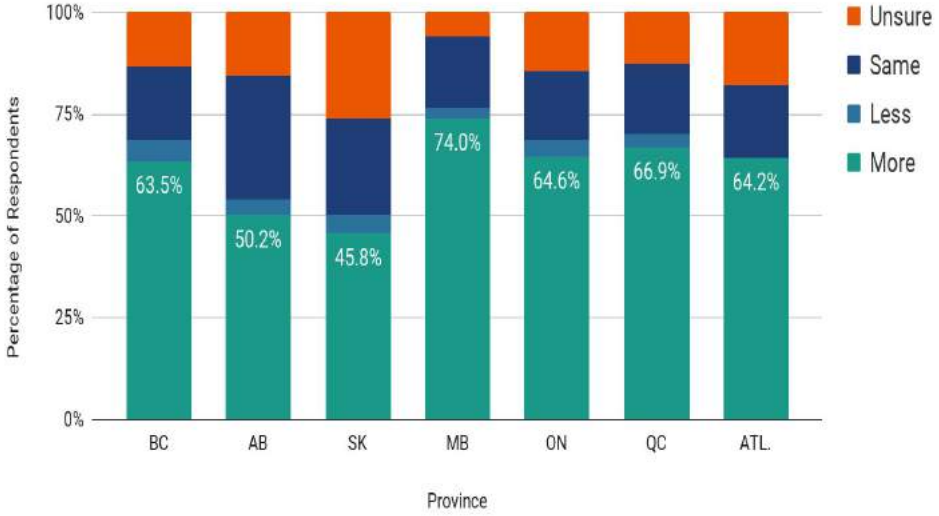
Do you think the education system (grades 7 - 12) should be doing more, less, or about the same as now to educate young people on climate change?

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

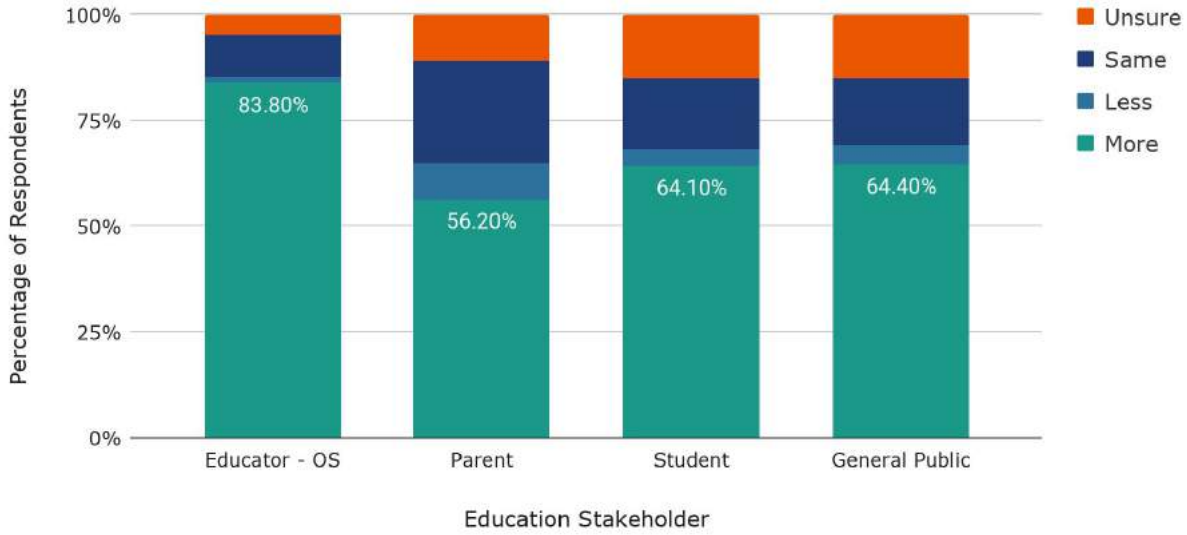
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

Do you think the education system (grades 7 - 12) should be doing more, less, or about the same as now to educate young people on climate change?

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

Do you think the education system (grades 7 - 12) should be doing more, less, or about the same as now to educate young people on climate change?

National

Most educators strongly believe that the formal education system (grades 7-12) should be doing more to educate young people about climate change (OS 82% and CS 76%). Approximately two-thirds of students (62%) and members of the general public (63%) indicated the same, while 57% of parents shared the same view.

Provincial

Across Canada, in most provinces, the majority of respondents think the school system should be doing more to educate about climate change (BC=64%, MB =74%, ON=65%, QC=67%, ATL=64%). Alberta (50%) and Saskatchewan (46%) had the lowest levels of support for the schools doing more to educate young people about climate change.

British Columbia

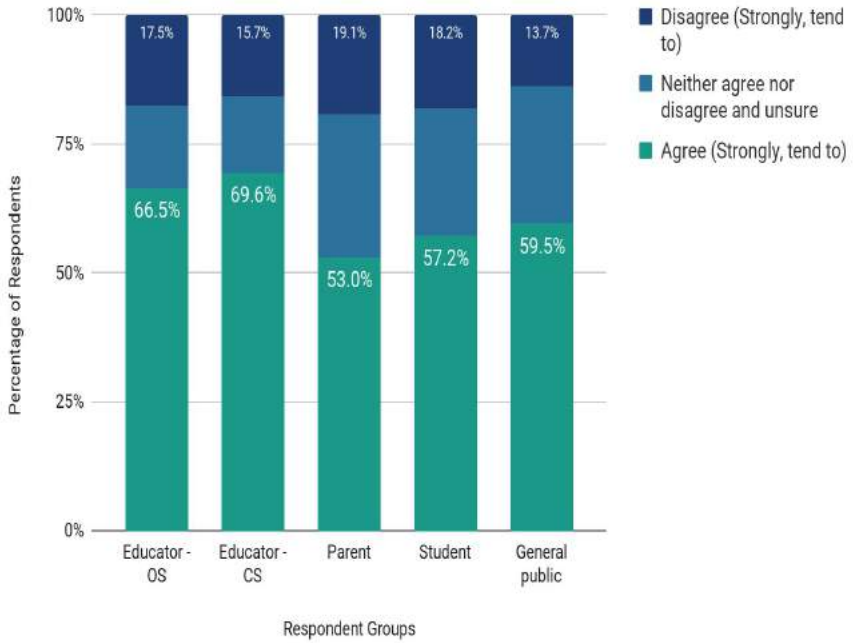
Educators believe that the education system should be doing more to educate young people on climate change (84%). Approximately two-thirds of students (64 %) and the general public (64%) agree that schools should be doing more to educate young people on the issue. Followed by 56 % of parents in agreement that the education system should be doing more.

British Columbia to National Data Comparison

Results in BC are similar to national data.

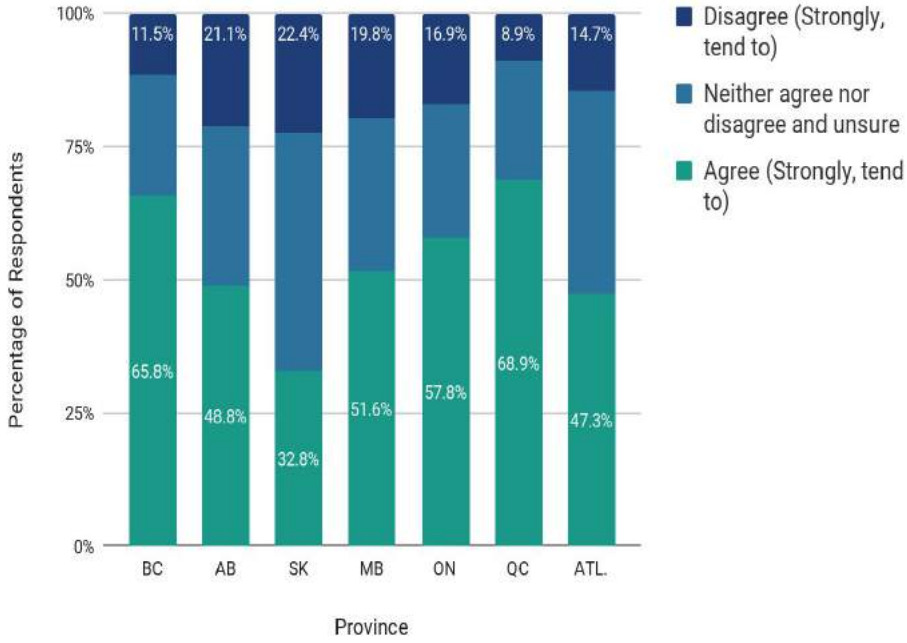
Climate change education is a high priority for schooling

National Results



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

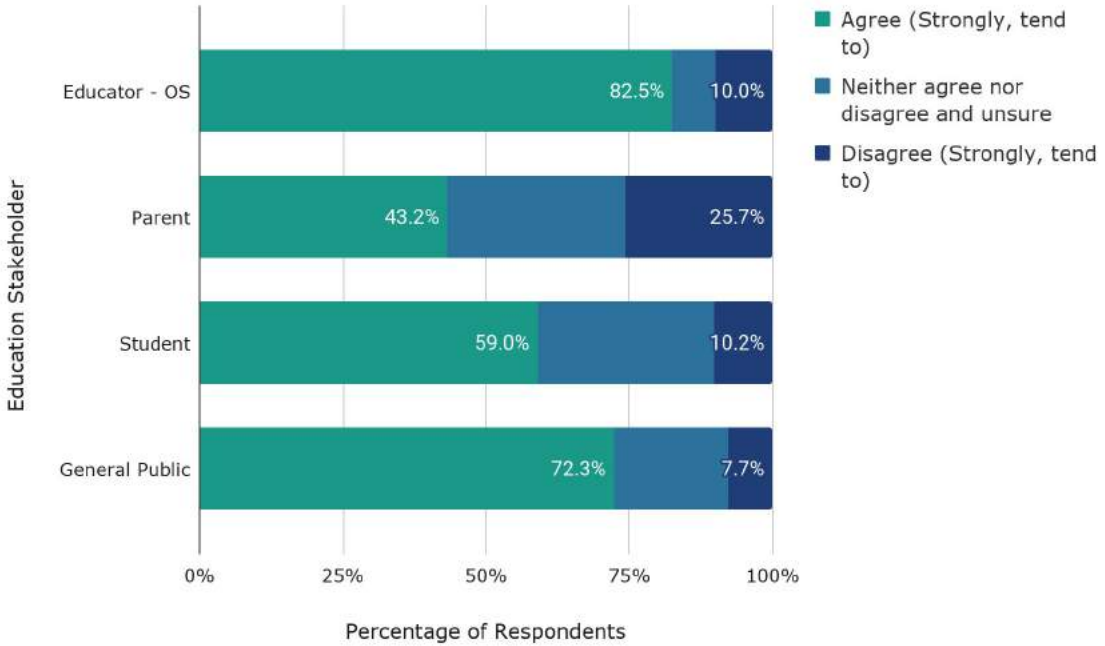
Provincial Results



n=2180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

Climate change education is a high priority for schooling (for students in grades 7-12)

British Columbia Results



n= 292 (Educator OS = 82, Parent =49, Student = 44, General Public = 117)

Climate change education is a high priority for schooling

National

Approximately two-thirds of both groups of educators (CS 70% and OS 67%) felt that climate change education was of high importance for grade 7 - 12 students to be learning in school. To a lesser degree, the majority of remaining respondent groups shared similar sentiments with members of the public at 60%, students at 57% and parents at the lowest agreement (53%).

Provincial

Regions across the country had differing opinions on the priority level that climate change education should have in schools. Quebec (69%) and British Columbia (66%) had the highest percentage of respondents who saw climate change as a high priority for schooling with over two-thirds of respondents agreeing that climate change is a high priority for students in grades 7-12, while Saskatchewan (33%) had only approximately one-third of respondents agree that it is a high priority.

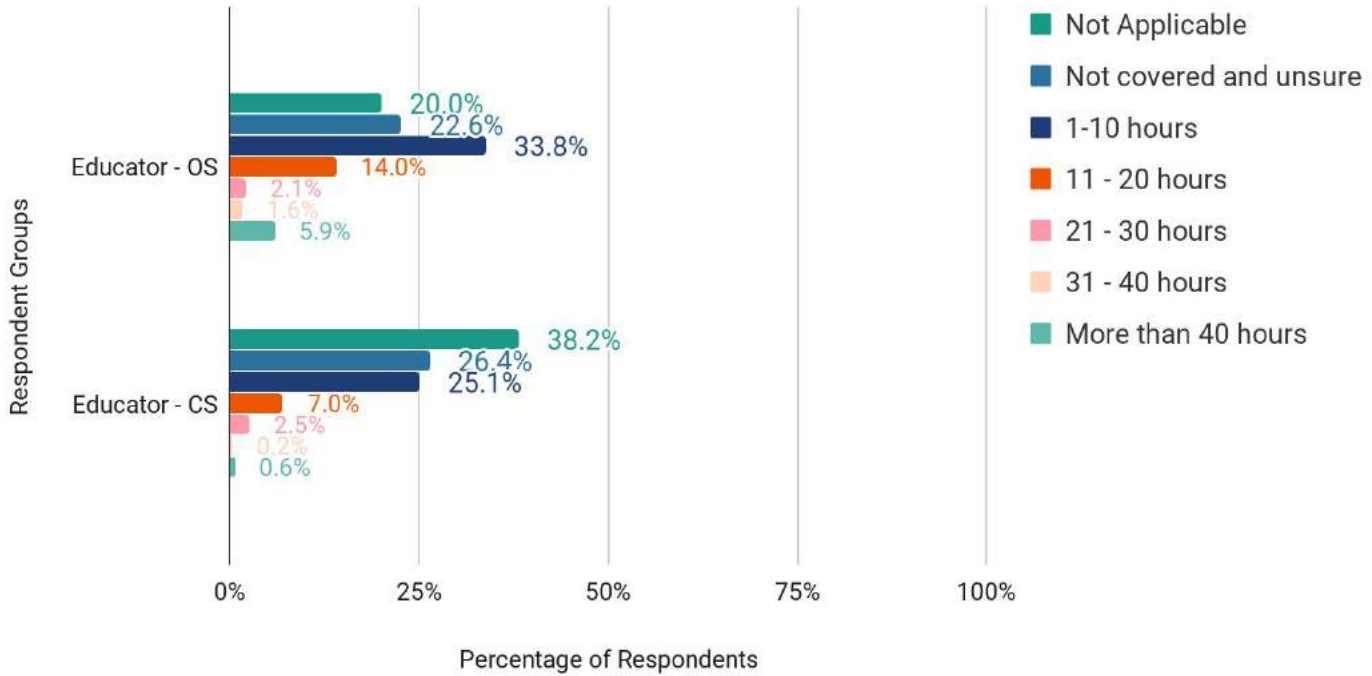
British Columbia

Climate change is a high priority for schooling according to 83% educators. Over half of students (59%) agree that it is a high priority, and 72 % of the general public. The lowest priority group is parents responding with 43% in agreement.

British Columbia to National Data Comparison

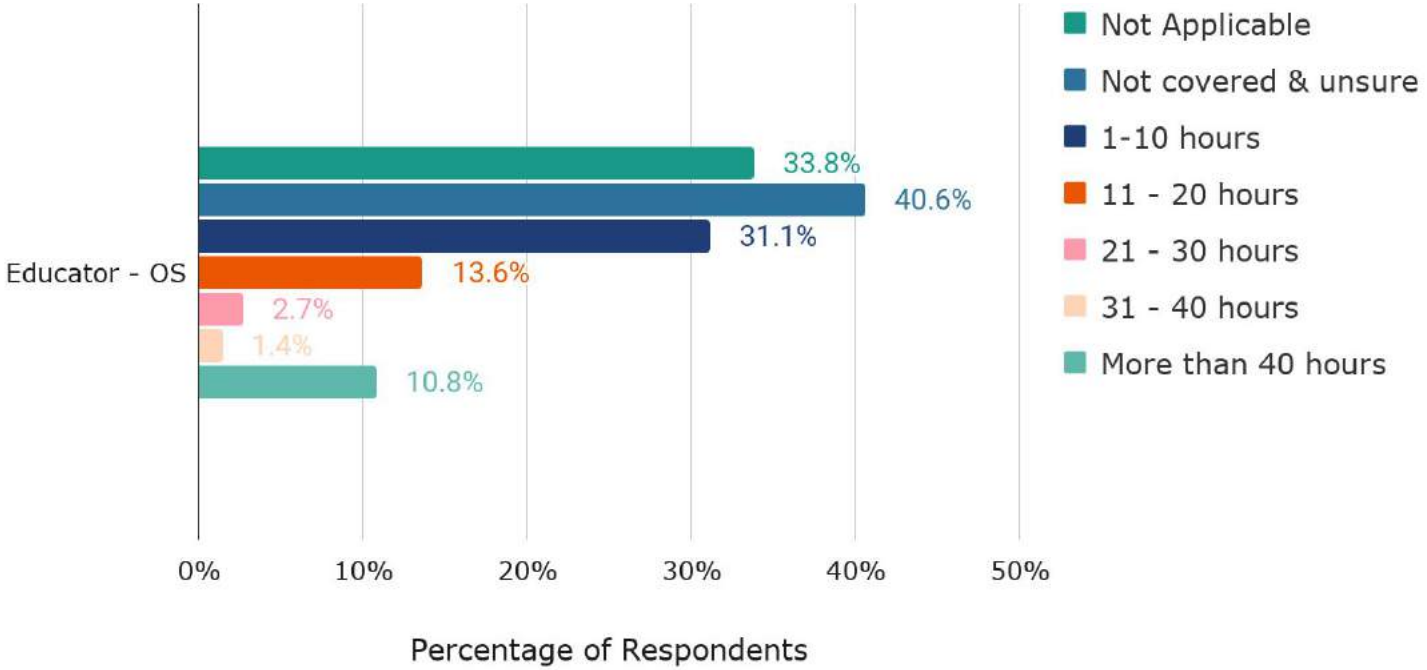
In BC , fewer students disagreed (10%) compared to the national results (18%). Responses in most categories were higher than the national average with the exception of parents responding 42% in BC compared to 53% national results.

NATIONAL - How many hours over a school year/semester would you typically spend covering topics related to climate change in your classroom?



n= 1231 (Educator OS = 1120, Educator CS = 111)

British Columbia - How many hours over a school year/semester would you typically spend covering topics related to climate change in your classroom?



n= 82(Educator OS = 82)

How many hours over a school year/semester would you typically spend covering topics related to climate change in your classroom?

National

When asked how many hours in a semester or year educators focus on climate change, 23% of the open-sample and 26% of closed-sample educators indicated that they do not cover climate change, while 20% of the open-sample, and 38% of the closed-sample educators reported that climate change is not applicable to the grade/subject they teach. 34% of the open-sample and 25% of the closed-sample educators spend 1 to 10 hours of instruction per year or semester focused on teaching climate change. For what has become the defining issue of the 21st century, classroom instruction time focused on climate change is minimal in most cases. Overall, 35% of closed-sample educators reported spending at least some time teaching about climate change. This compares with the American NPR/IPSOS poll from March of 2019, which found that 42% of teachers teach about climate change (Kamenetz, 2019).

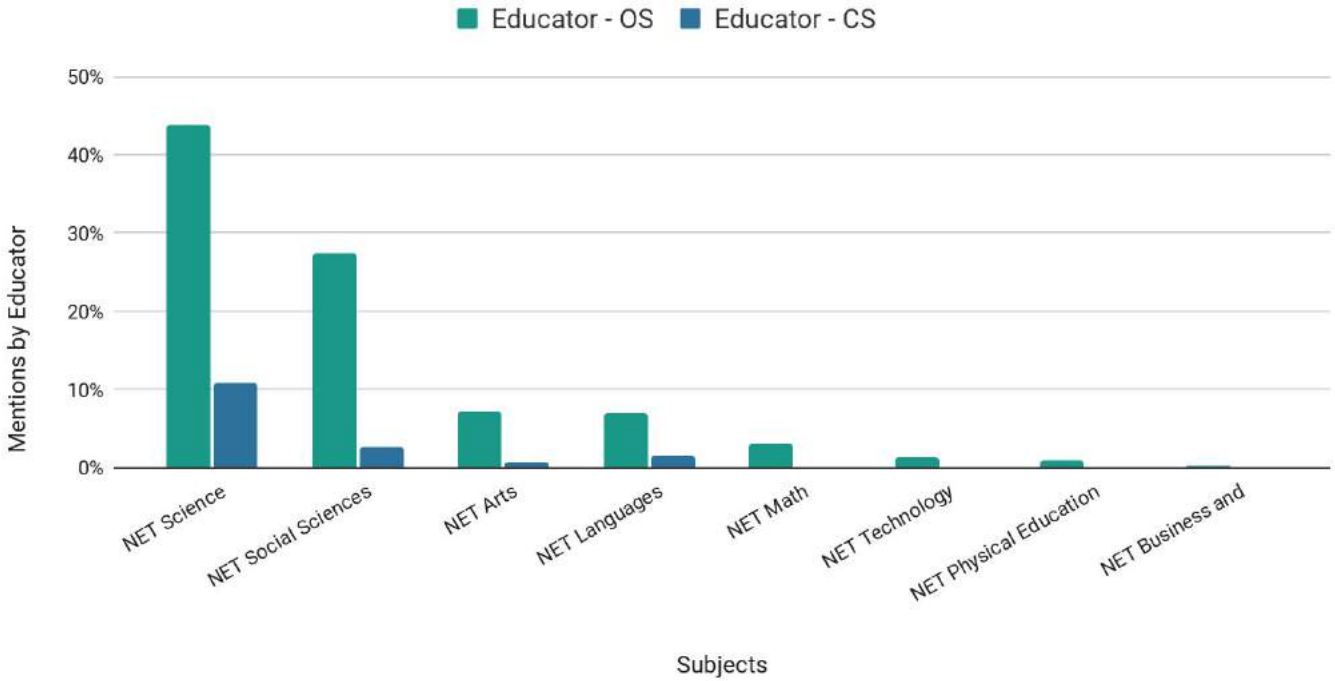
British Columbia

59 % of educators reported teaching some hours of climate change in the classroom. The largest group response was 1-10 hours with 31 % of educators selecting. 11% of educators teach more than 40 hours.

British Columbia to National Data Comparison

The percentage of educators who reported climate change as not being covered is higher in BC, 41% compared to 20% nationally. Teachers in BC who report teaching more than 40 hours is almost double (11%) the national results (6%).

National - Do you cover climate change topics in any of the subjects that you teach? If yes, which subjects?



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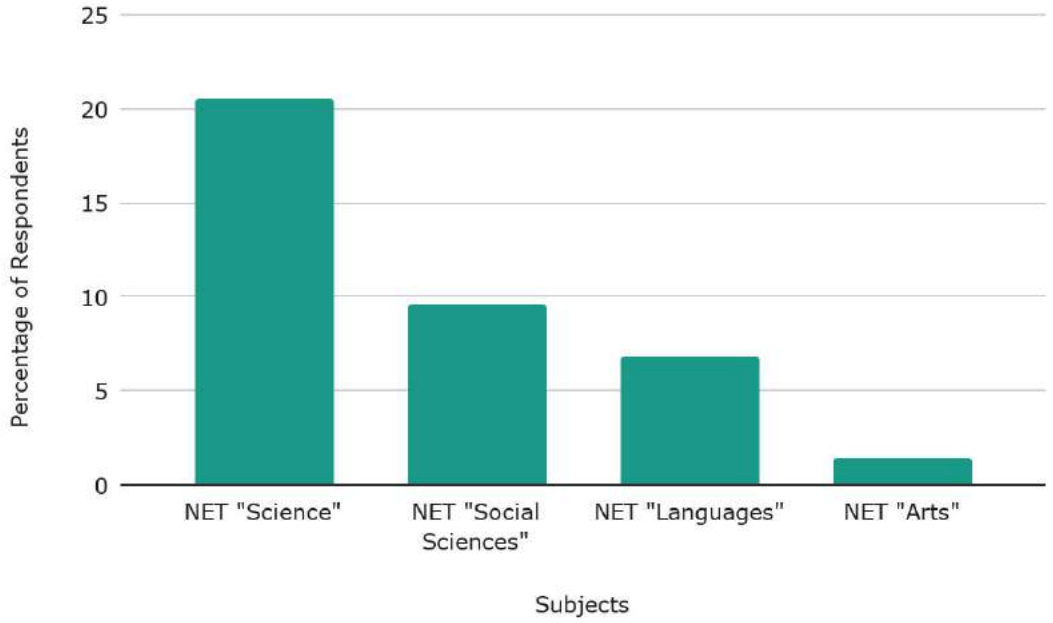


n= 82 (Educator OS = 82)

Do you cover climate change topics in any of the subjects that you teach? If yes, which subjects?

National

Science-related subjects were the most chosen by both open-sample and closed-sample educators as the places in which teachers most often integrate climate change topics, followed by social sciences. The arts, languages, math, technology, physical education, and business and economic courses were the least mentioned, if mentioned at all.

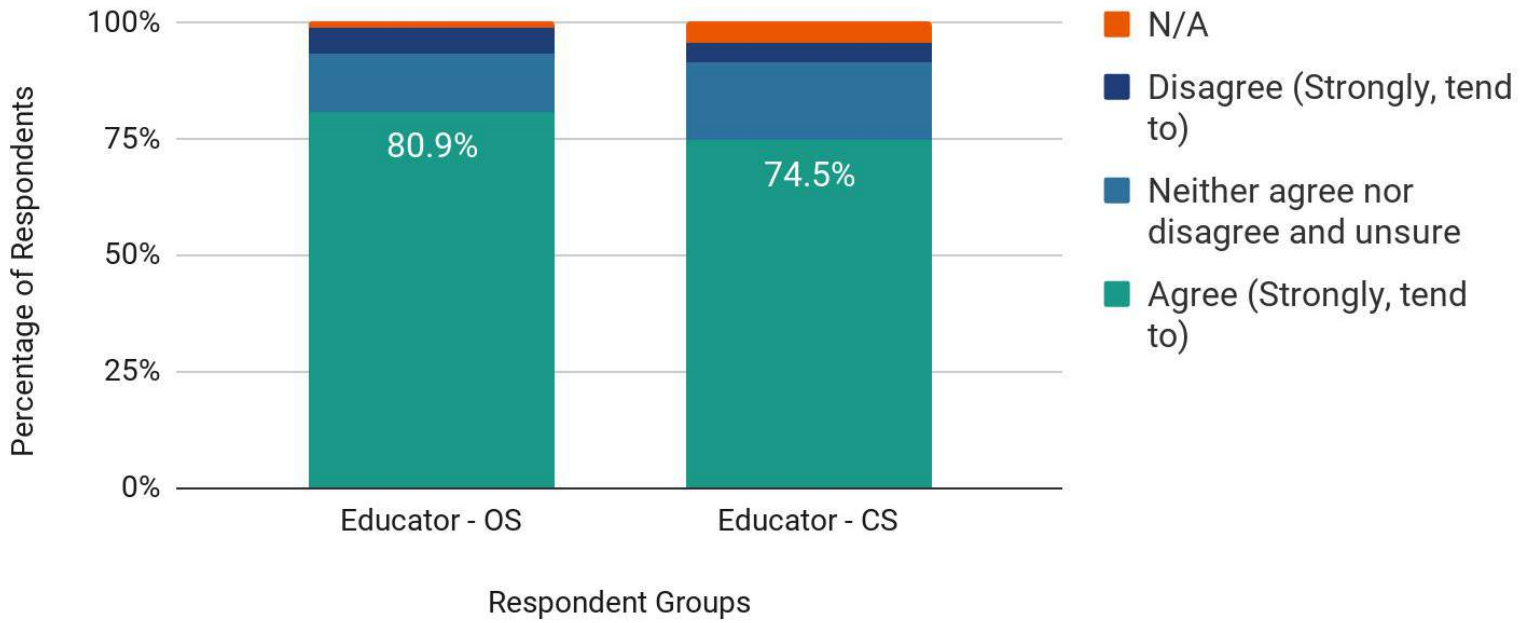
British Columbia

BC results align with the national report results: with science-related courses being the subjects that teachers most often incorporate climate change education, followed by social sciences. Less mentioned were arts, languages, math, technology, physical education and business.

British Columbia to National Data Comparison

Educators report far less in all subject areas compared to national results. Net science 21% in BC compared to 43.8% in national results and net social science 10% in BC compared to 27.3% in national results. Nationally, arts is the third most selected subject where educators report integrating climate change learning whereas in BC, languages is selected more often than arts by educators.

National - I believe climate change education is the role of all teachers



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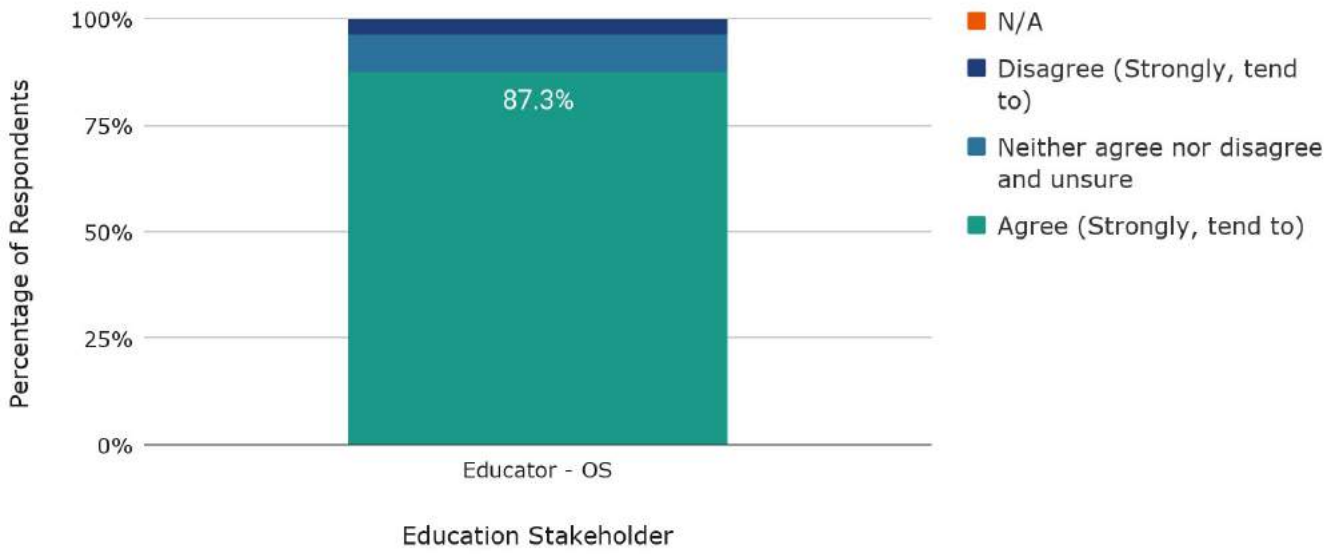
British Columbia - I believe climate change education is the role of all teachers



n= 82 (Educator OS = 82)

I believe climate change education is the role of all teachers

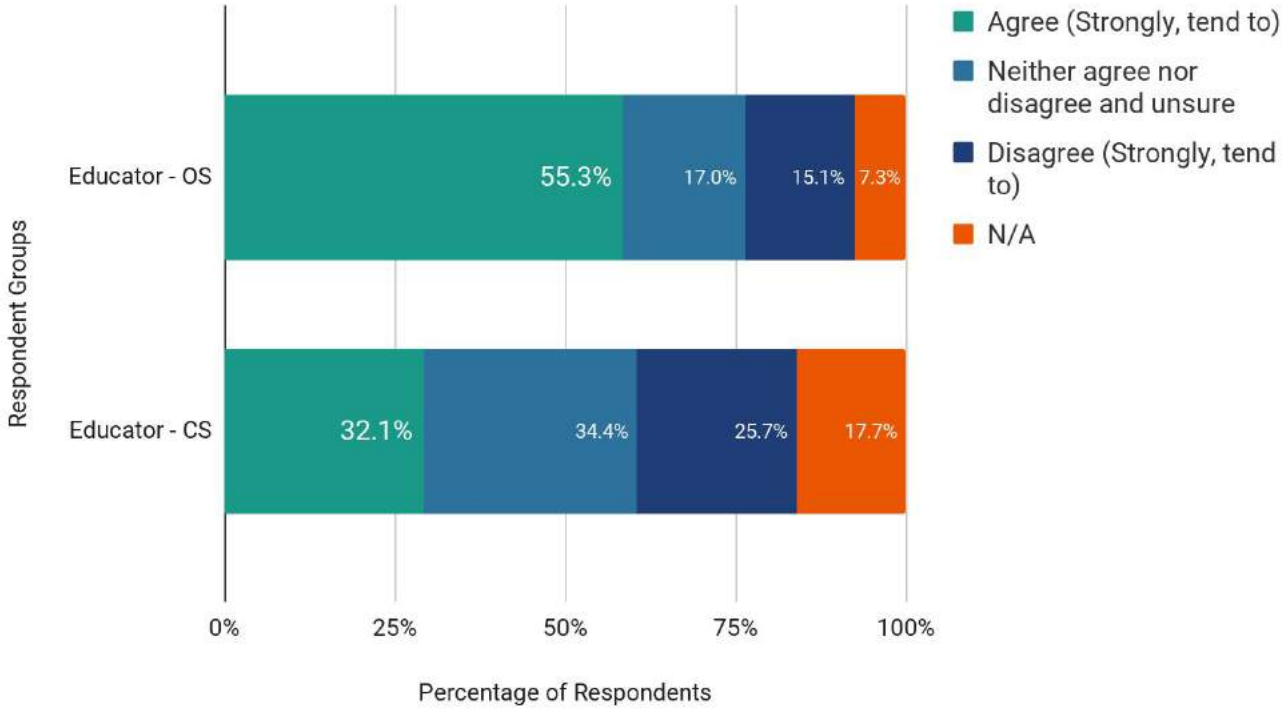
National

The majority of educators (81% of open-sample educators and 75% of closed-sample educators) believe that climate change education is the role of all teachers.

British Columbia

The majority of educators (87%) believe that climate change is the role of all teachers.

National - I feel I have the knowledge and skills needed to teach climate change education to my students



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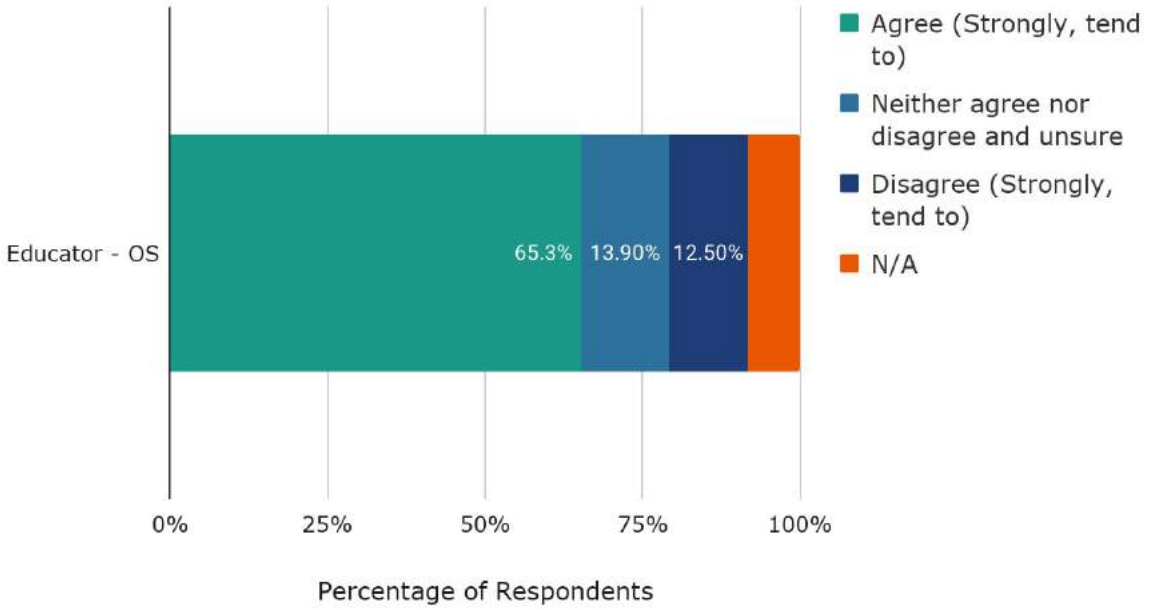
British Columbia - I feel I have the knowledge and skills needed to teach climate change education to my students



n= 82 (Educator OS = 82)

I feel I have the knowledge and skills needed to teach climate change education to my students

National

There is a disparity between educators' level of preparedness for teaching climate change. Over half of open-sample educators (55%) indicated feeling prepared, compared to less than one-third of closed-sample educators (32%).

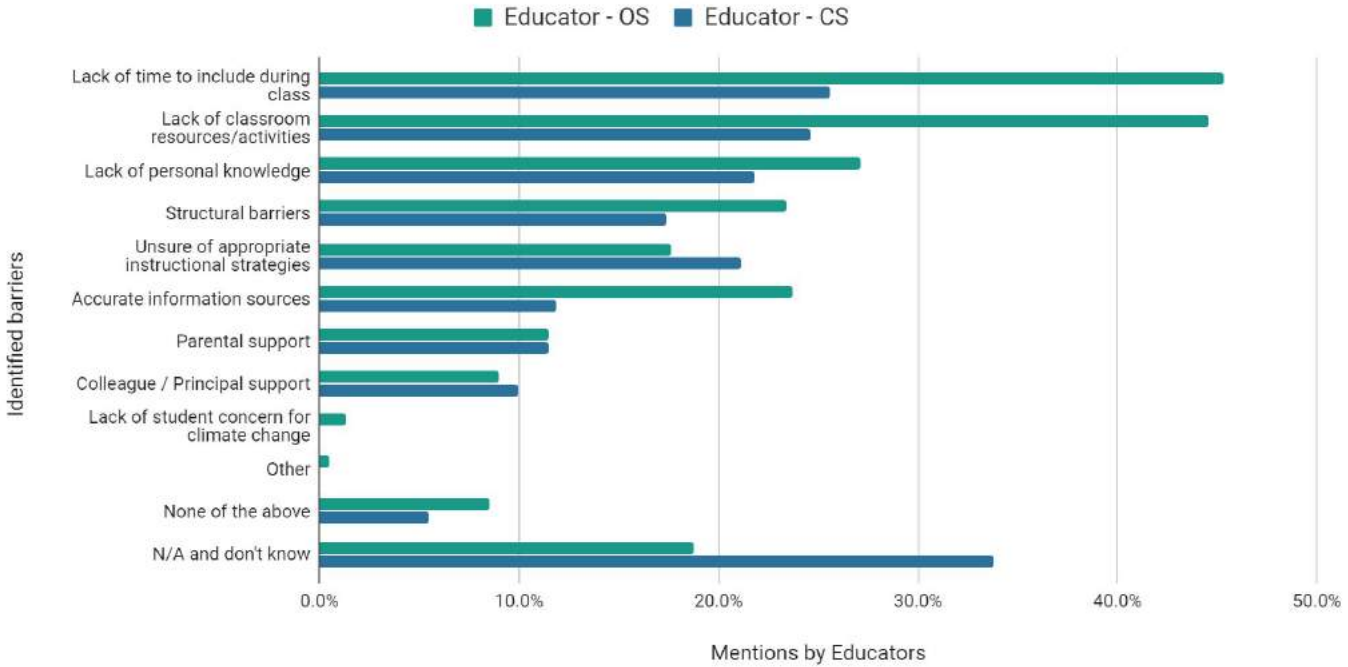
British Columbia

Similar to the National report, in BC over half of educators reported feeling adequately prepared to teach climate change (64%).

British Columbia to National Data Comparison

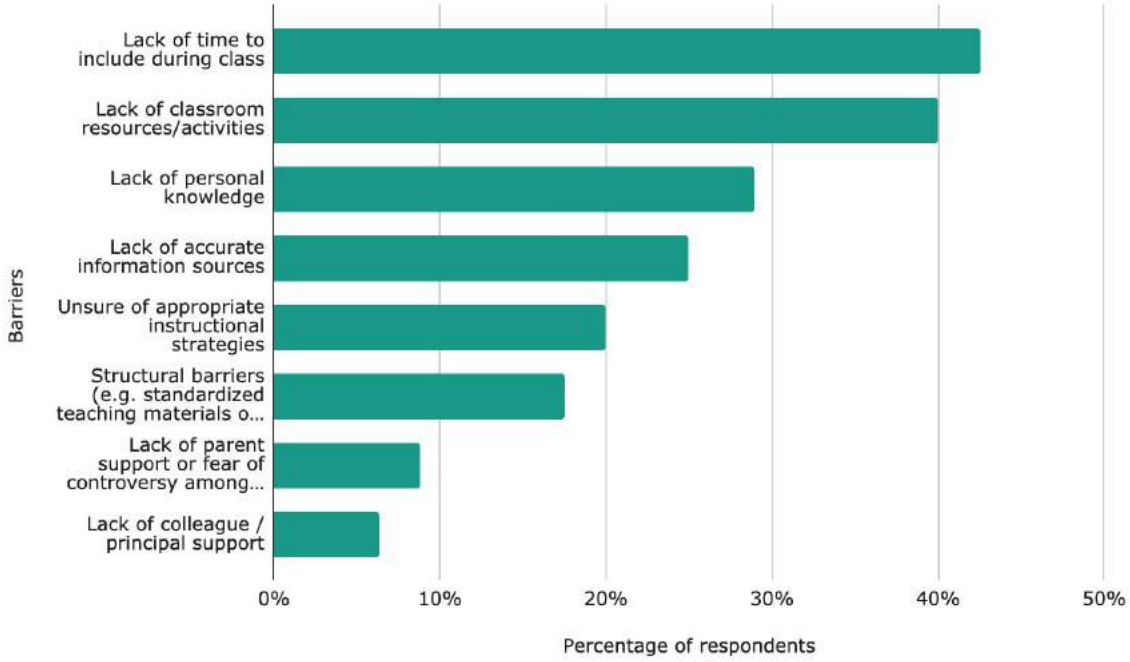
Educators in BC reported Agree (strongly tend to), more than the national results by 10% (55% nationally compared with 65% in BC) .

NATIONAL - What are some of the barriers you have experienced when attempting to include climate change education into your classroom?



n=1231 (Educator OL = 1120, Educator CL = 111)

British Columbia - What are some of the barriers you have experienced when attempting to include climate change education into your classroom?



n= 82 (Educator OS = 82)

What are some of the barriers you have experienced when attempting to include climate change education into your classroom?

National

Presented with a list of choices, the largest barrier that educators reported when attempting to include climate change education in classrooms was “lack of time”, followed by “lack of classroom resources”, and “lack of personal knowledge” by both open-sample and closed-sample educators. Parental, colleague, or principal support, or lack of student concern about climate change were identified as barriers by a small percentage of educators.

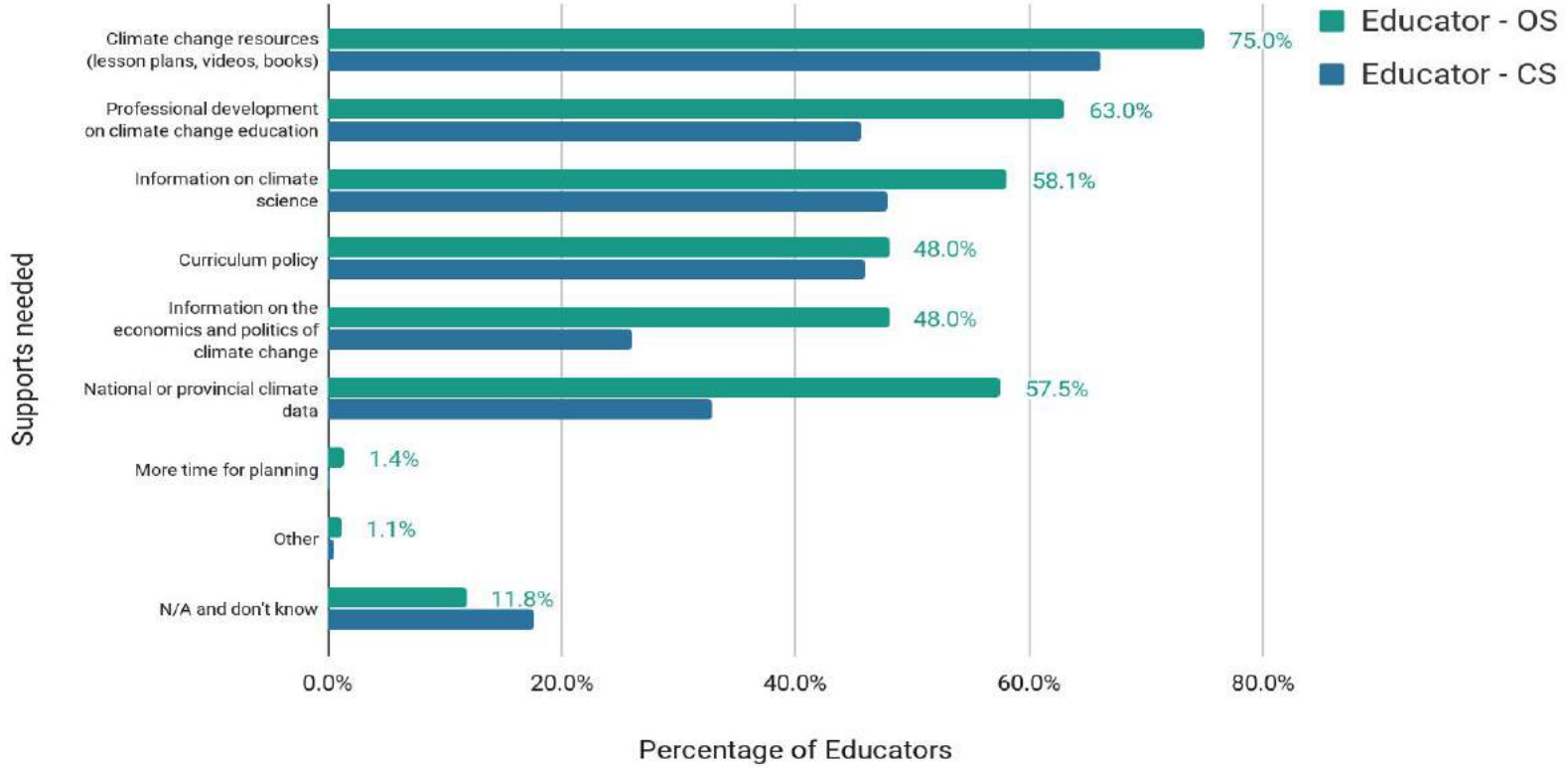
British Columbia

Similar to the national results, the top three barriers for educators were: “lack of classroom resources”, “lack of time to include during class” and “lack of personal knowledge.”

British Columbia to National Data Comparison

The most significant barriers were consistent between national and BC results.

NATIONAL - What support(s) do you need to teach climate change in your subjects?



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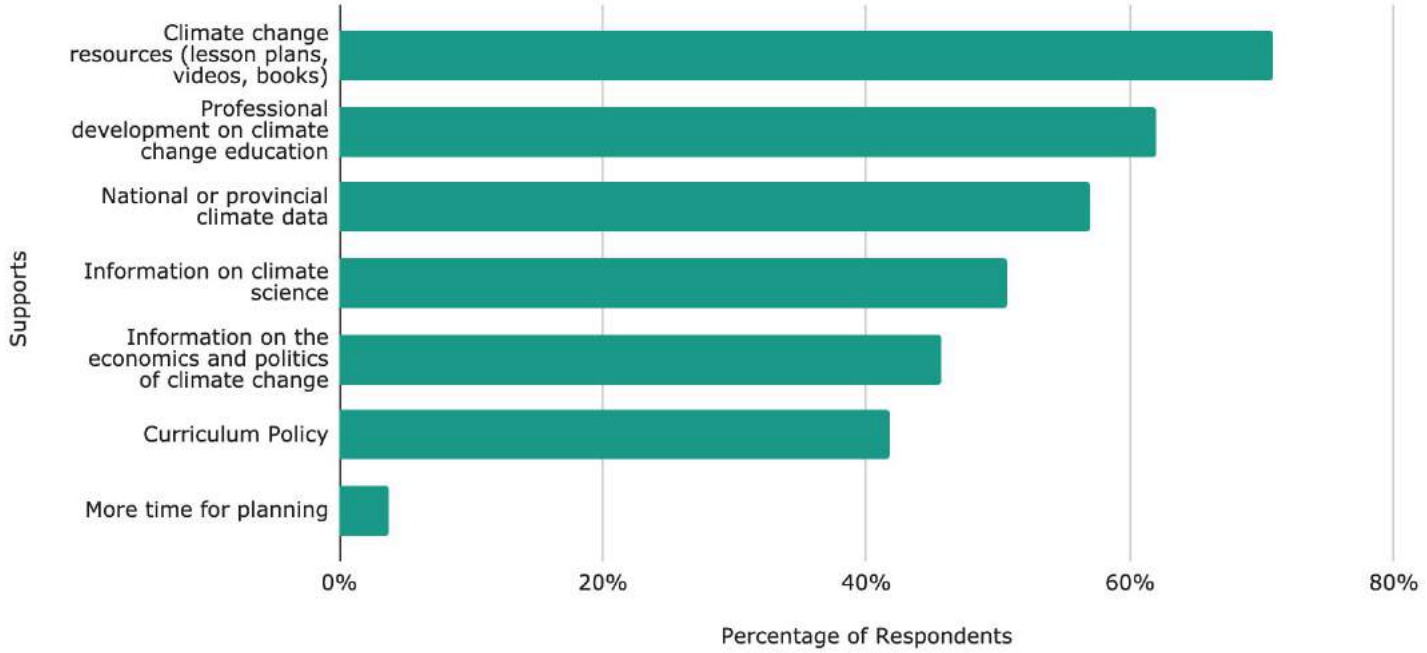


n= 82 (Educator OS = 82)

What support(s) do you need to teach climate change in your subjects?

National

Presented with a list of possible choices of supports educators might need to teach climate change in their subjects, “climate change resources (including lesson plans, videos and books)” were the most chosen, followed by “professional development on climate change education,” “information on climate science,” “curriculum policy,” “information on the economics and politics of climate change,” and “national/provincial climate data.” Least noted was time for planning.

British Columbia

When presented with a list of supports, educators top three supports were: “climate change resources,” “professional development” and “national or provincial climate data.”

British Columbia to National Data Comparison

Educators results in BC compared similarly to the national results with N/A and dont know not featuring in BC results.

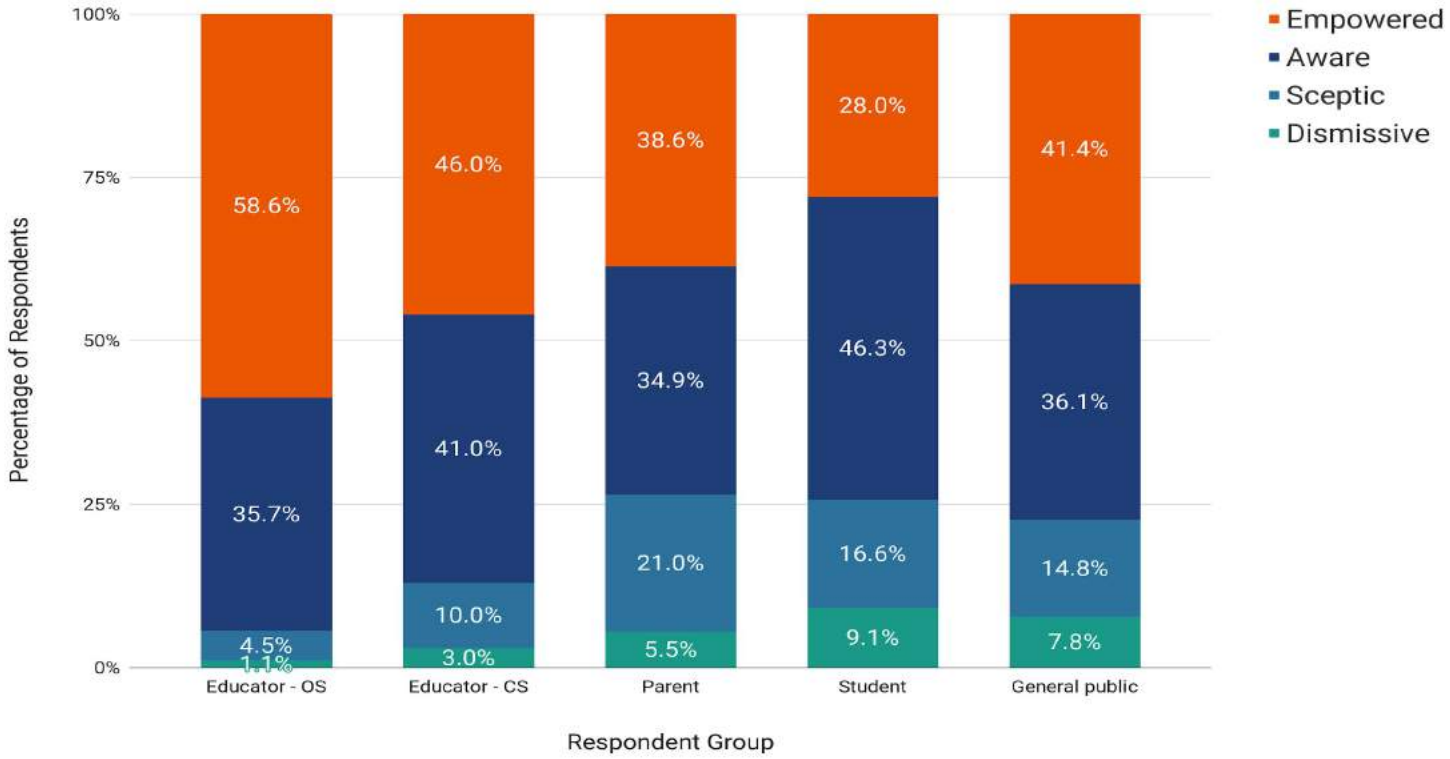
Ladder of Engagement: Overview

EcoAnalytics put forward a Canadian ladder of engagement. The map is comprised of four audiences: *dismissive*, *sceptics*, *aware, and empowered*. We chose to apply the ladder of engagement to segmented groups to create a clearer picture of how Canadians perceive and engage with climate change at a broad level.

- **Dismissives:** disagree that climate change is happening
- **Sceptics:** agree that climate change is happening and do not think it's caused by humans OR, neither agree nor disagree that climate change is happening
- **Aware:** agree that climate change is happening and do think it's caused by humans AND indicated that there is nothing that we can do to change it
- **Empowered:** agree that climate change is happening and do think it's caused by humans AND indicated that there are things we can do to change it

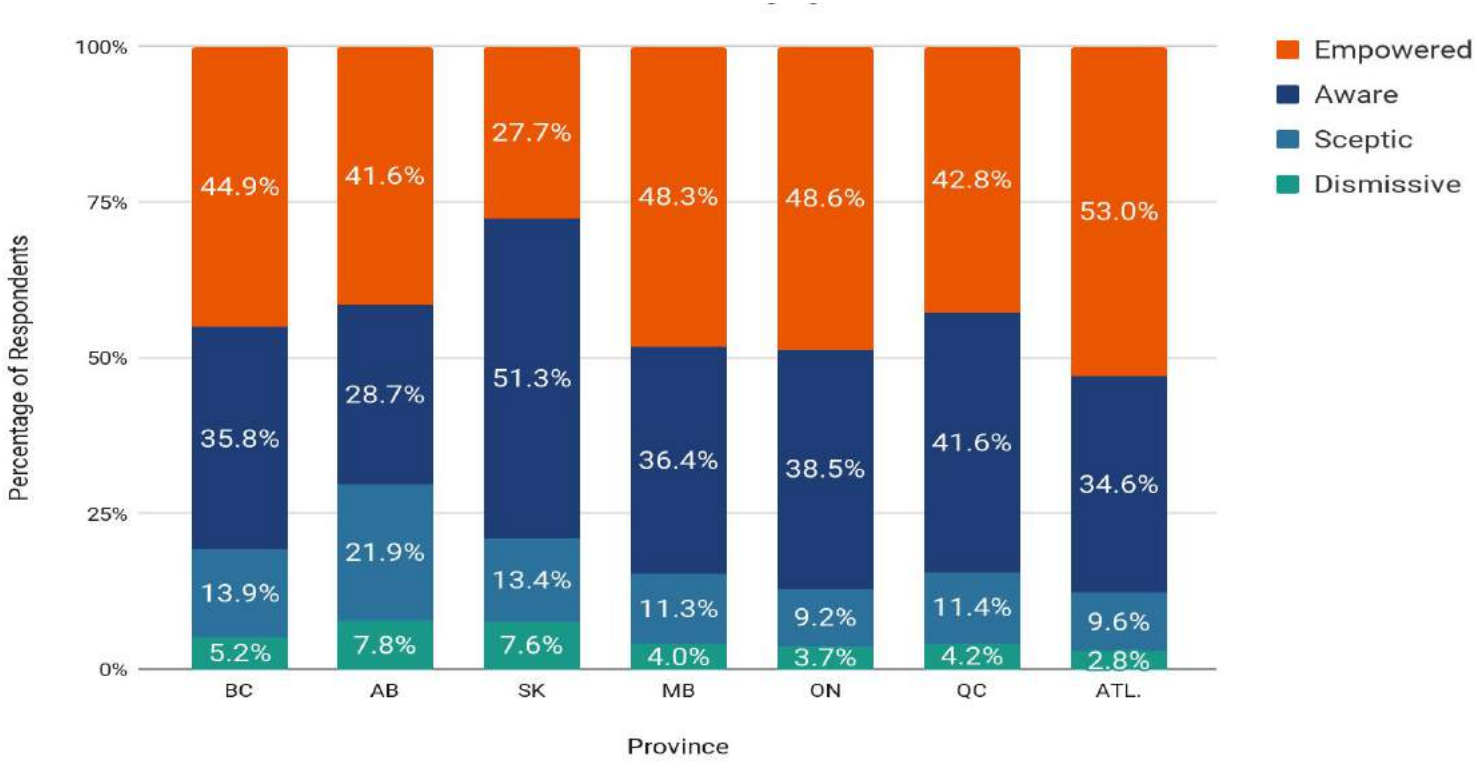
"In reality, the engagement process is non-linear, but for analytical purposes it helps to present groups of Canadians in a ranking from least to most likely to be "engaged" (Ecoanalytics, 2016).

Ladder of Engagement: National Overview



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, Student CS= 486, General public = 908)

Ladder of Engagement: Provincial Breakdown



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