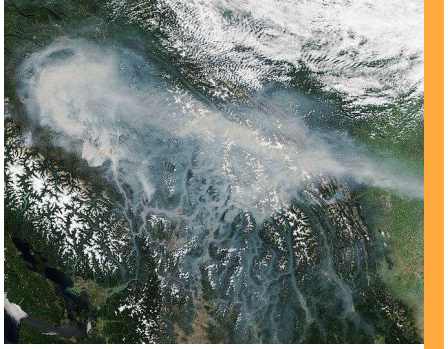




Canada, Climate Change and Education: Opportunities for Public and Formal Education

Focus on Manitoba

Regional Report

A project of

Lakehead University

Learning for a Sustainable Future LSF

L'éducation au service de la Terre LST

With support from

SHRC CRSH

Leger Metrics

NSERC CRSNG

Climate Change Connection

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

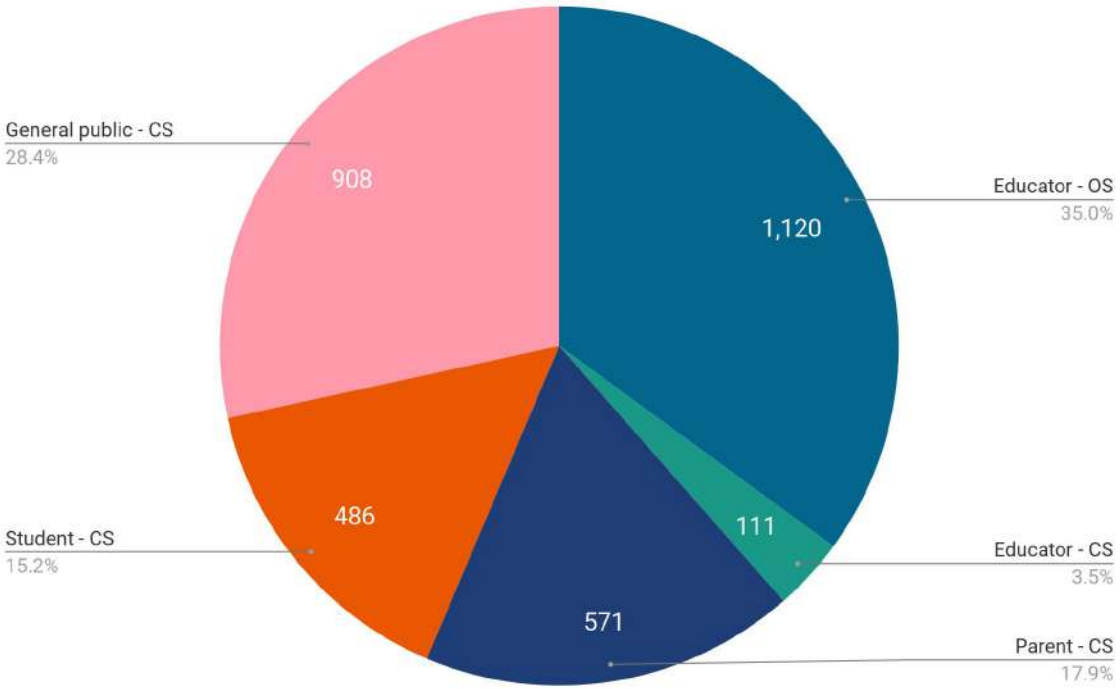
This survey tool was developed in May 2018 by Dr. Ellen Field, Lakehead University, with Learning for a Sustainable Future and Leger Research Intelligence.

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.

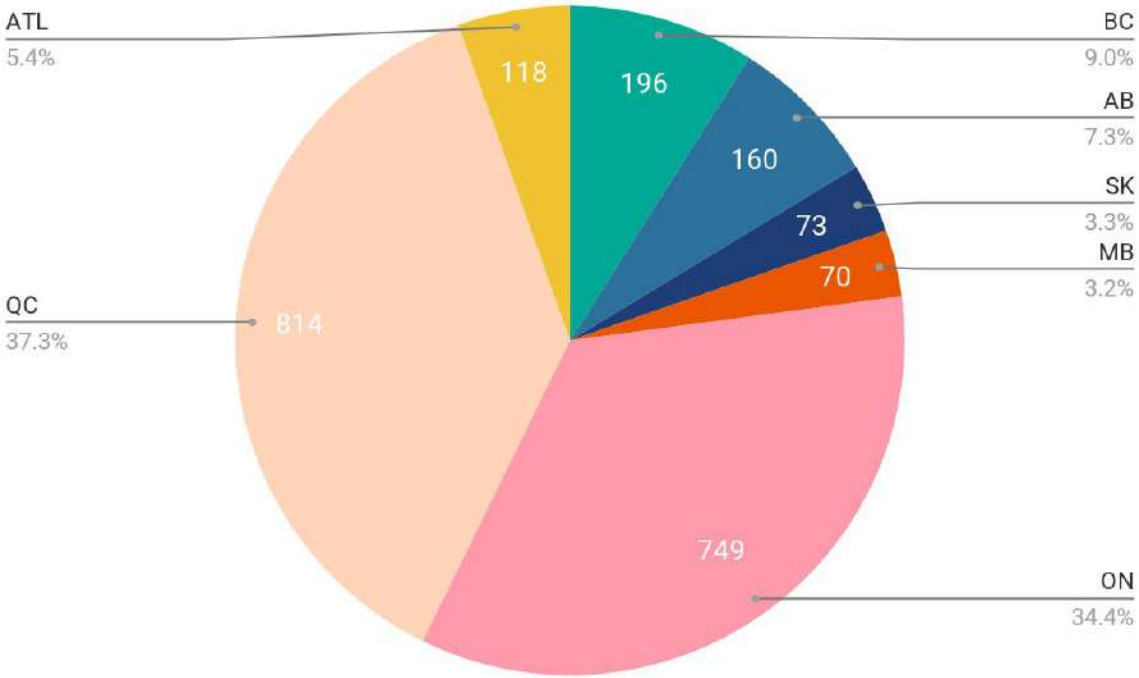
See Methodology section in National Survey Report for full description.

National Respondents



n=3196 (Educator OS = 1120, Educator CS = 111, Parent CS= 571, Student CS= 486, Other 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 and First Nations, Metis, and Inuit 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 - Manitoba

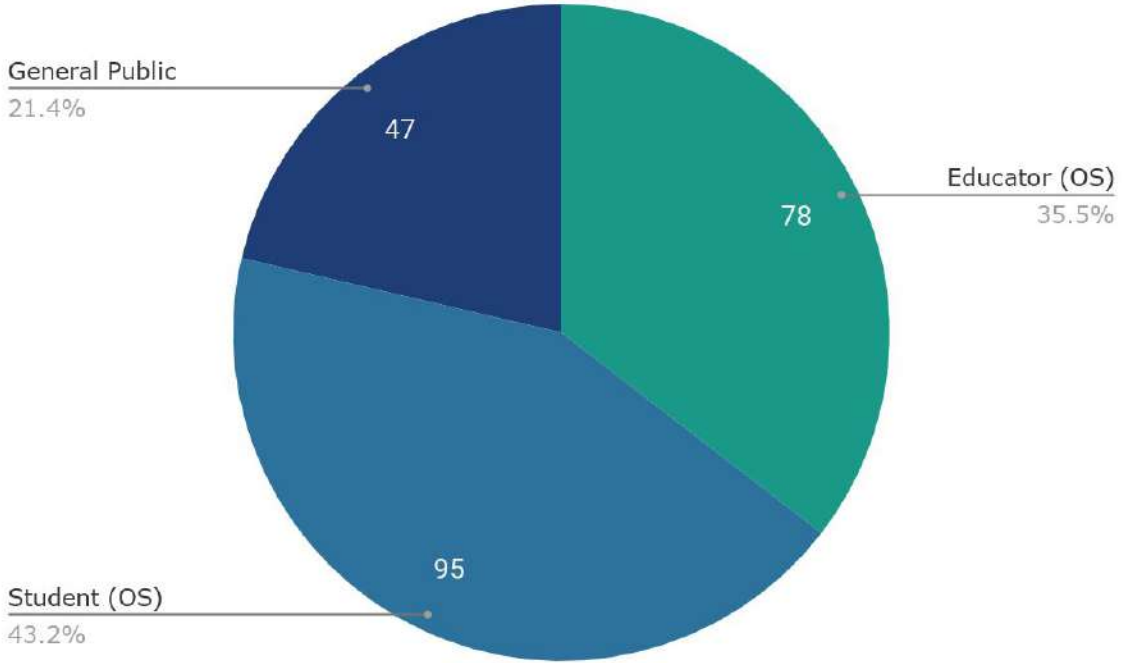
To generate an overview of the province of Manitoba, data has been visualized of the following:

- Perceptions of climate change and its risks
- Current levels of knowledge and understanding
- Manitobans views on how the education system should respond to climate change
- Report on climate change education practice in Manitoba

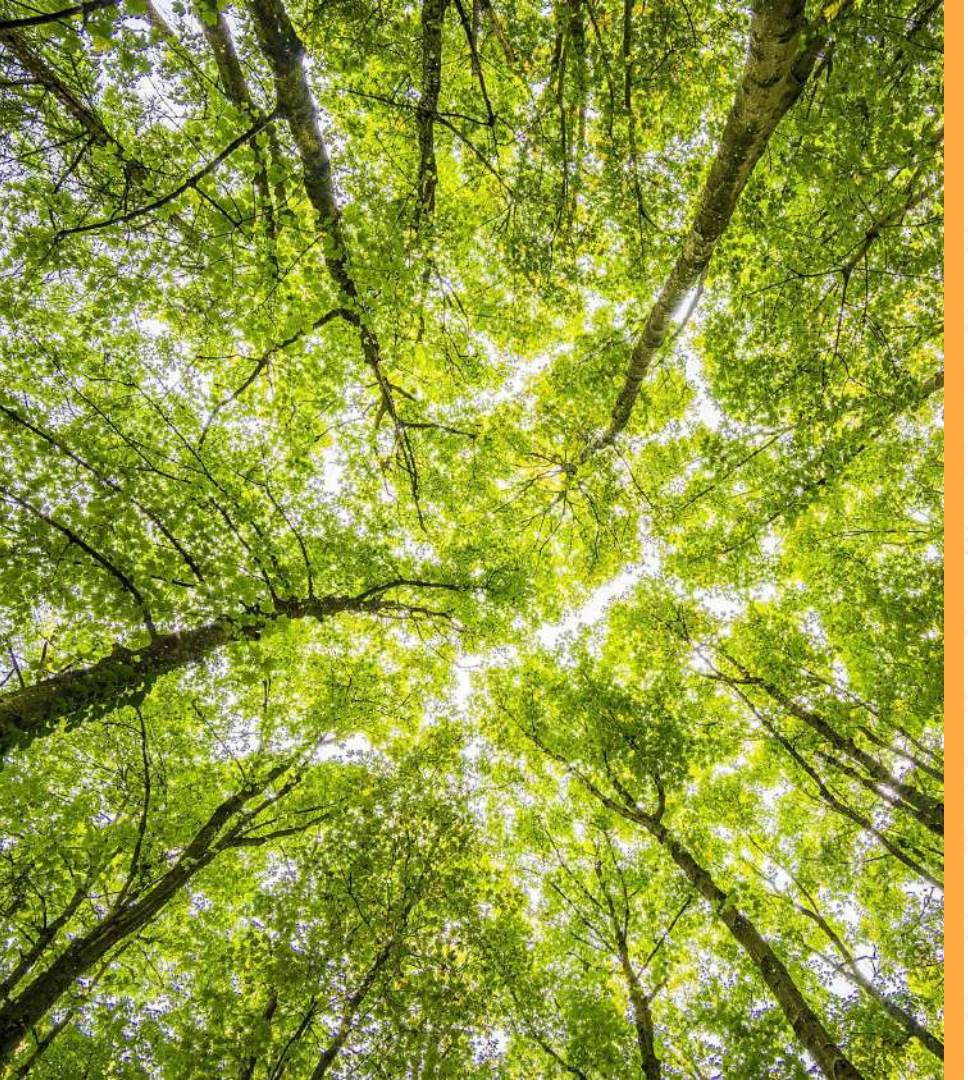
Due to not having a large enough sample size (>30) to report on from each respondent group in the closed-sample, data is pulled from both OS and CS data sets. The CS data is considered representative of the population and percentages are weighted accordingly. OS data is not considered representative of the population, because of the ability for respondents to opt-in, and is therefore not weighted. Throughout this report, we consistently drew on:

Included	
• Educator OS = 78	• General Public CS = 47
• Student OS = 95	

Manitoba Respondents



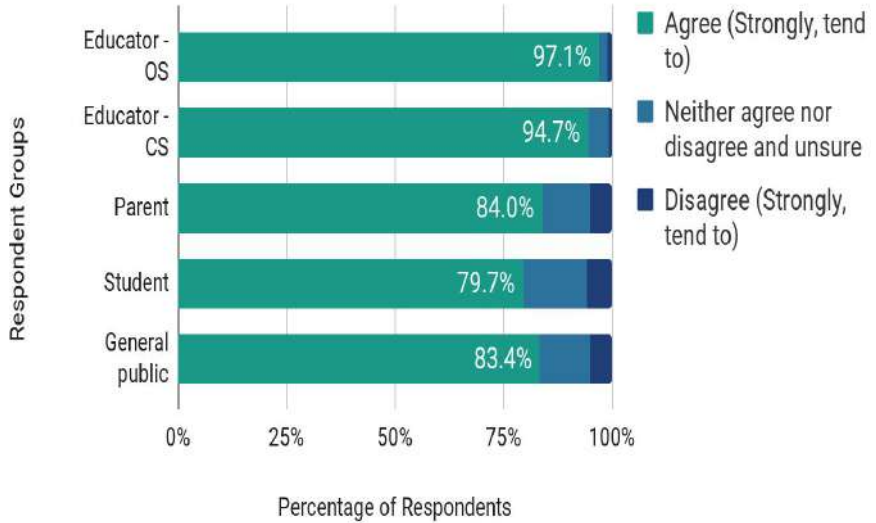
n=220 (Educator OS = 78, Student OS= 95, General public = 47)



Perceptions

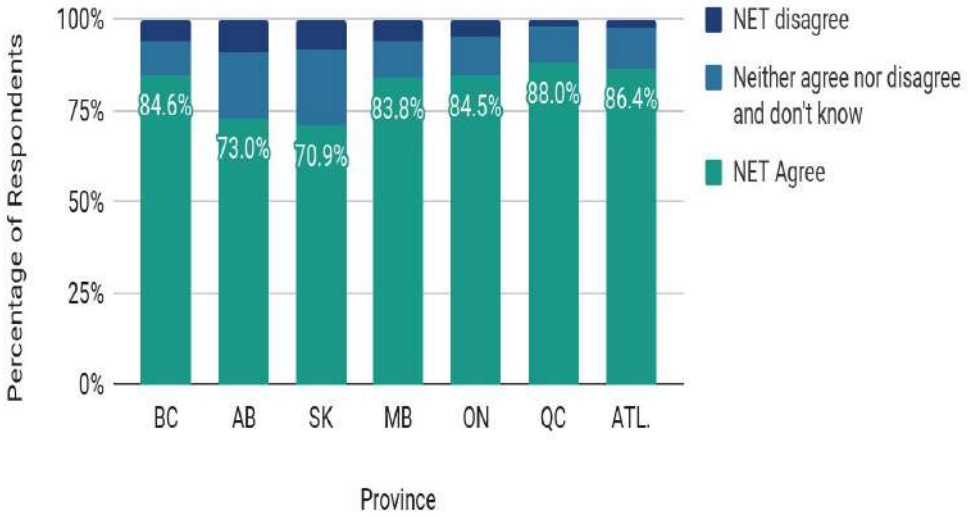
I am certain that climate change is really happening

National Results



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

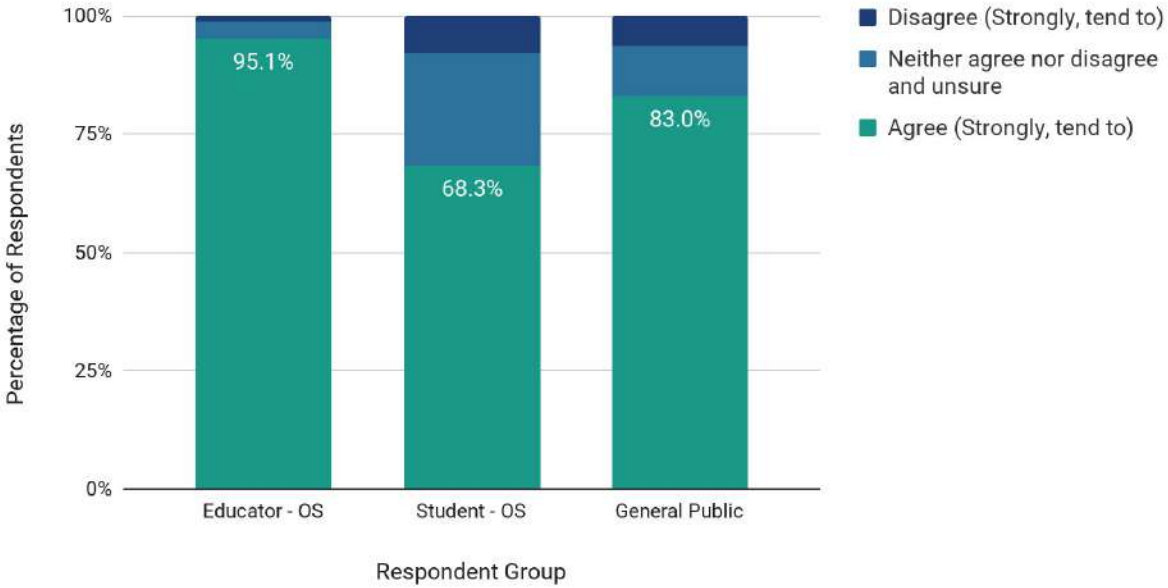
Provincial Results



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

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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).

Manitoba

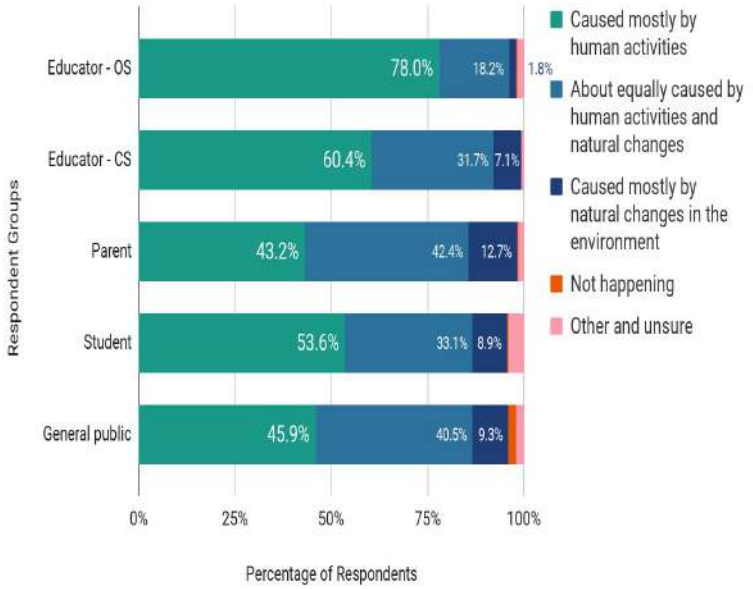
Open-sample educators are the most certain that climate change is happening. 95% of open-sample educators agreed with the statement "I am certain that climate change is really happening," followed by 83% of the general public. Just over two-thirds of students agree with this statement (68%).

Notable differences

Although the results align with the national results, (84%) agree that climate change is happening, students' level of agreement in Manitoba (68%) falls far below the national student results (80%).

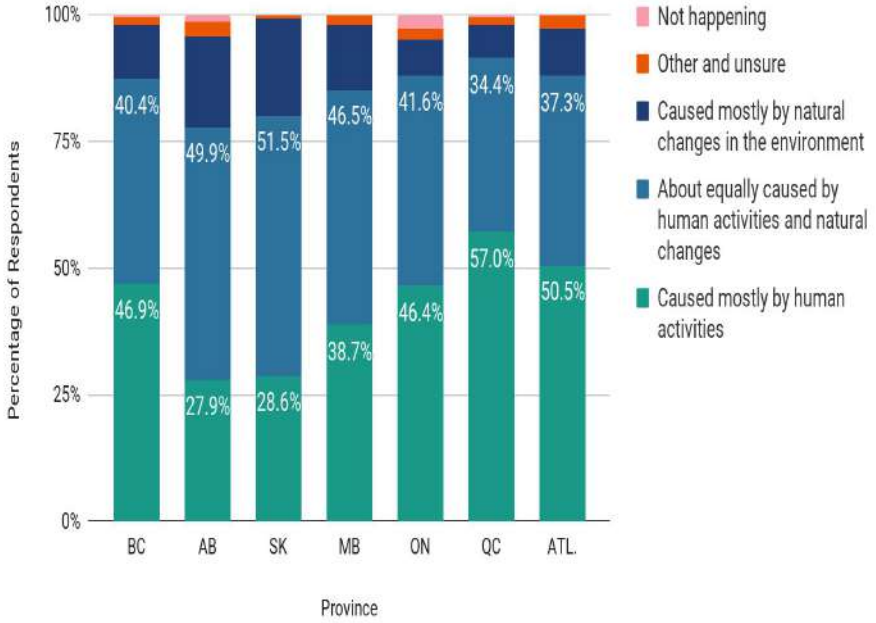
Do you think climate change is…

National Results



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

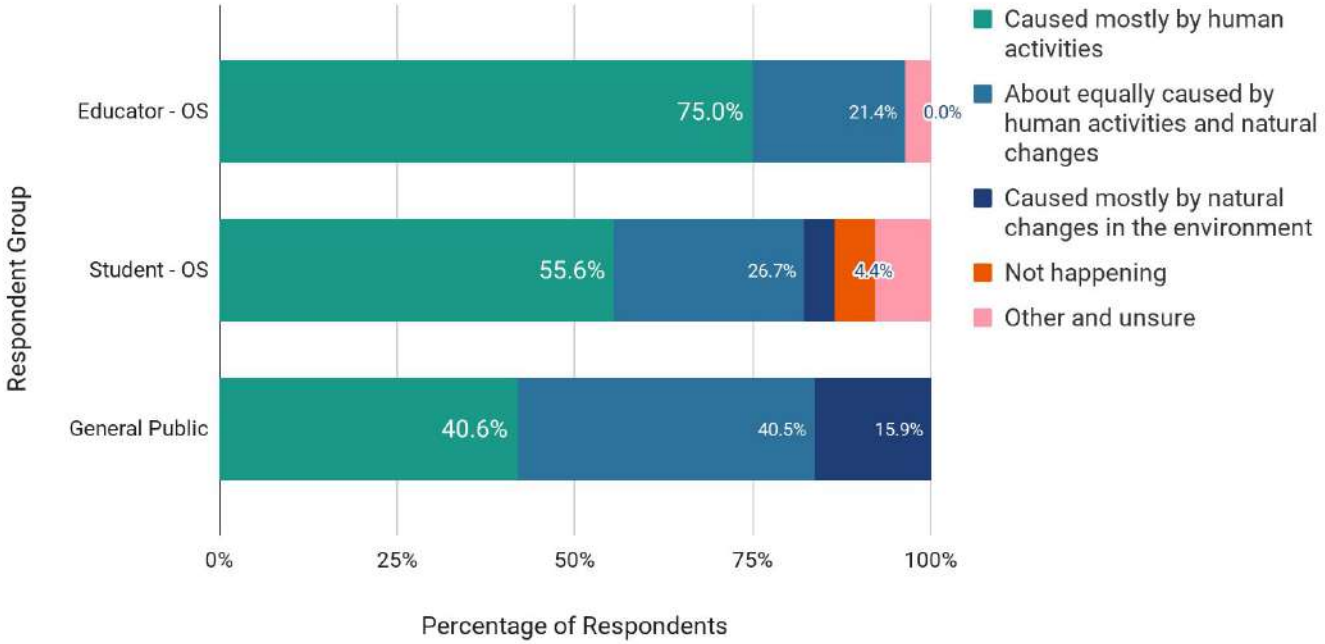
Provincial Results



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

Do you think climate change is…

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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 varies across regional jurisdictions. 47% of BC respondents accept climate change is 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%.

Manitoba

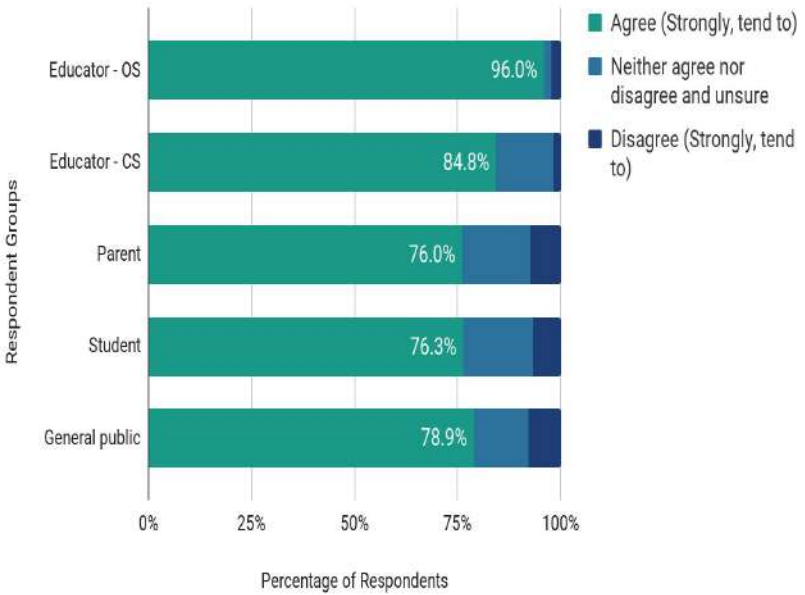
The majority of open-sample educators agree that climate change is mostly caused by humans (75%), whereas just over half (56%) of students agree that humans are the primary cause, and only 41% of the general public agree. Sixteen percentage of the general public believe that climate change is mostly caused by natural changes in the environment.

Notable differences:

Responses in Manitoba are fairly similar to the national results with the largest number of educators believing that climate change is caused by humans, followed by students, and the lowest level of agreement amongst the general public. However, the belief that climate change is caused mostly by natural changes is slightly higher in Manitoba's general public (16%) compared to the national results (9%).

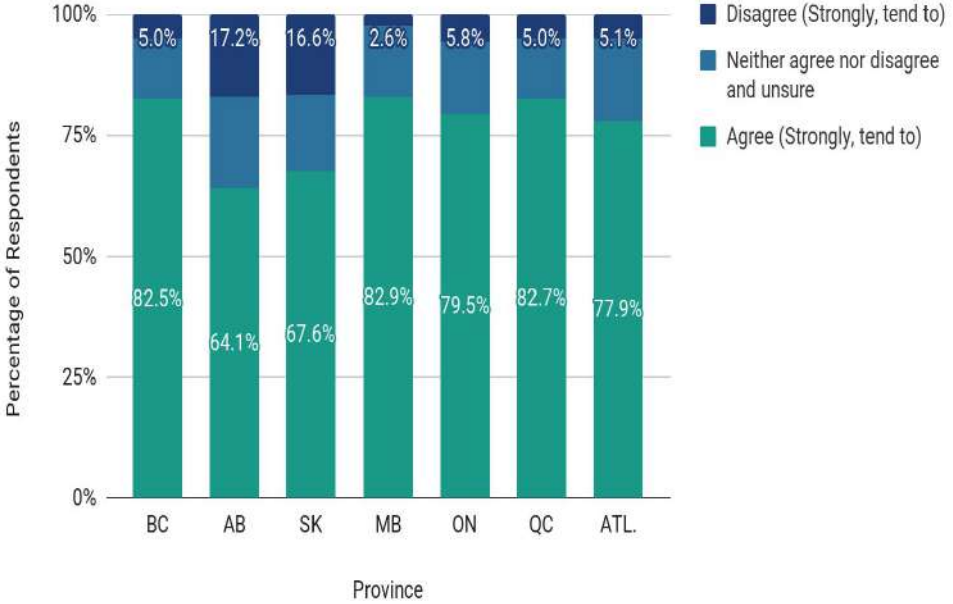
I am concerned about the impacts of climate change

National Results



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

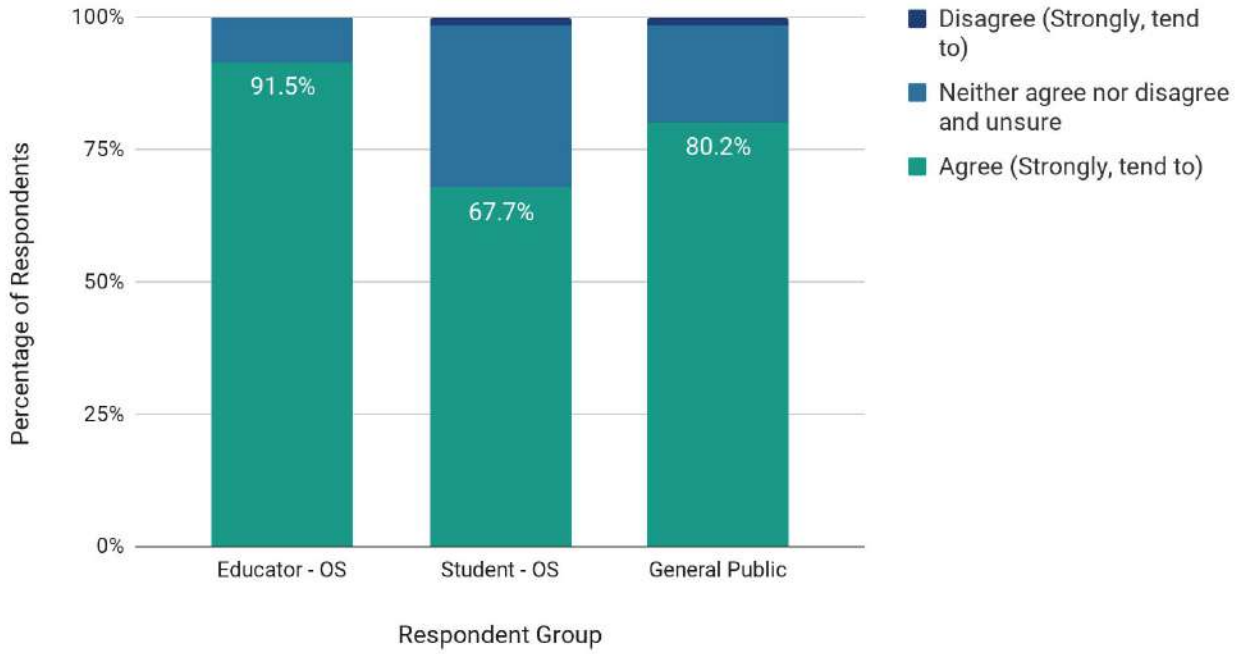
Provincial Results



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

I am concerned about the impacts of climate change

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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 (open-sample=96% and closed-sample=85%).

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.

Manitoba

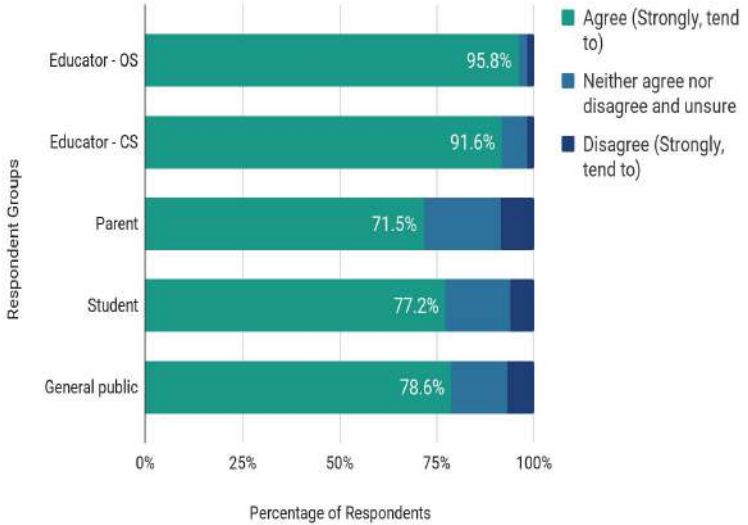
Overall, the majority of respondents in Manitoba expressed concern about the impacts of climate change. This statement is especially true for open-sample educators of which 92% agreed with the statement: “I am concerned about the impacts of climate change”. The general public expressed a high level of concern as well with 80% in agreement, students expressed the lowest level of concern with 68% agreeing.

Notable differences:

Open-sample educators and the general public’s responses in Manitoba very closely align to that of the national results. Students in Manitoba, however, have an 8% lower level of agreement (68%) compared to the 76% nationally.

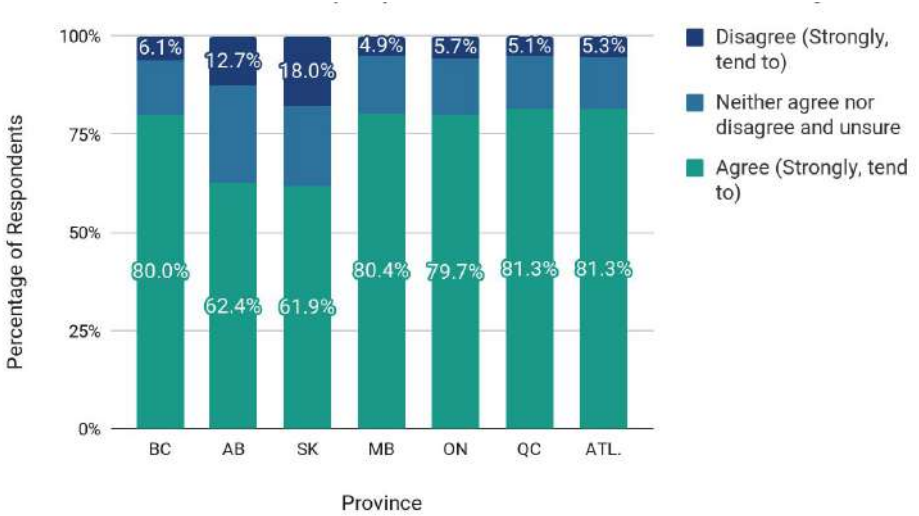
There are risks to people in Canada from climate change.

National Results



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

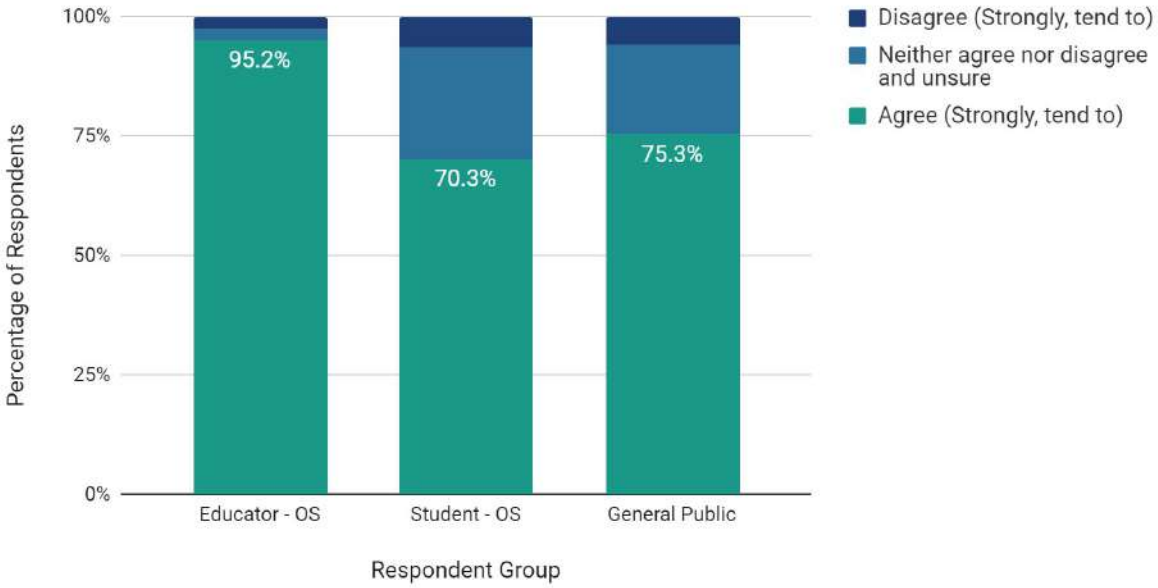
Provincial Results



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

There are risks to people in Canada from climate change.

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

There are risks to people in Canada from climate change.

National

There is high awareness that climate change poses a risk to Canadian citizens 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.

Manitoba

Respondent groups across the board in Manitoba agree that there are risks to people in Canada from climate change. Open-sample educators have the highest level of awareness (95%), followed by the general public (75%) and then students (70%).

Notable difference:

Responses are similar in Manitoba compared to the national results. All responses indicate a majority of respondents in agreement with the existence of risks because of climate change. Students in Manitoba have a slightly lower agreement rate (70%) compared to national results (77%).

Knowledge, Understanding & Information

List of 10 Climate Knowledge Questions and Answers

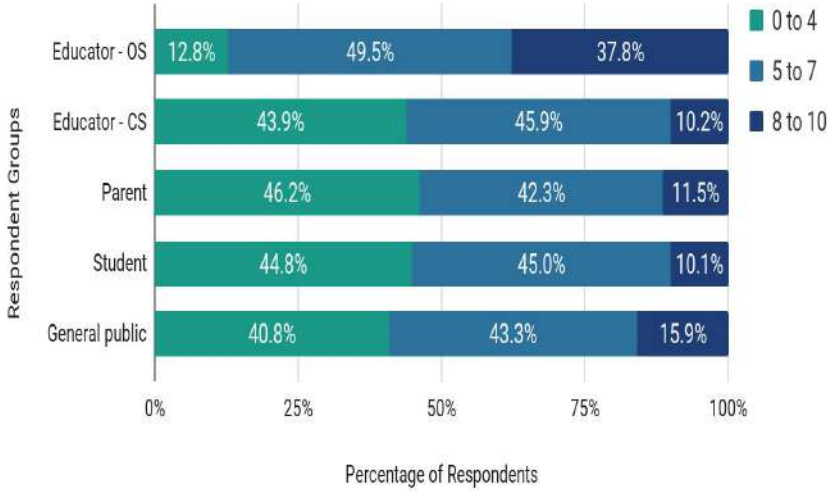
1. Do you think climate change is…	**Caused mostly by human activities** Caused mostly by natural changes in the environment About equally caused by both human activities and natural changes Not happening Other (please specify) Unsure
2. Which comes closest to your own view?	**Most climate scientists 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

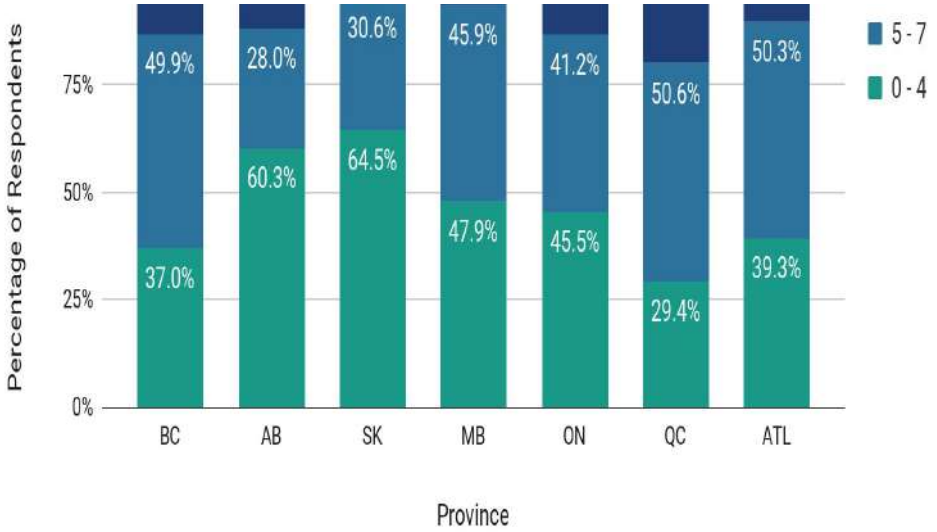
Number of correct responses to 10 climate knowledge questions.

National Results



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

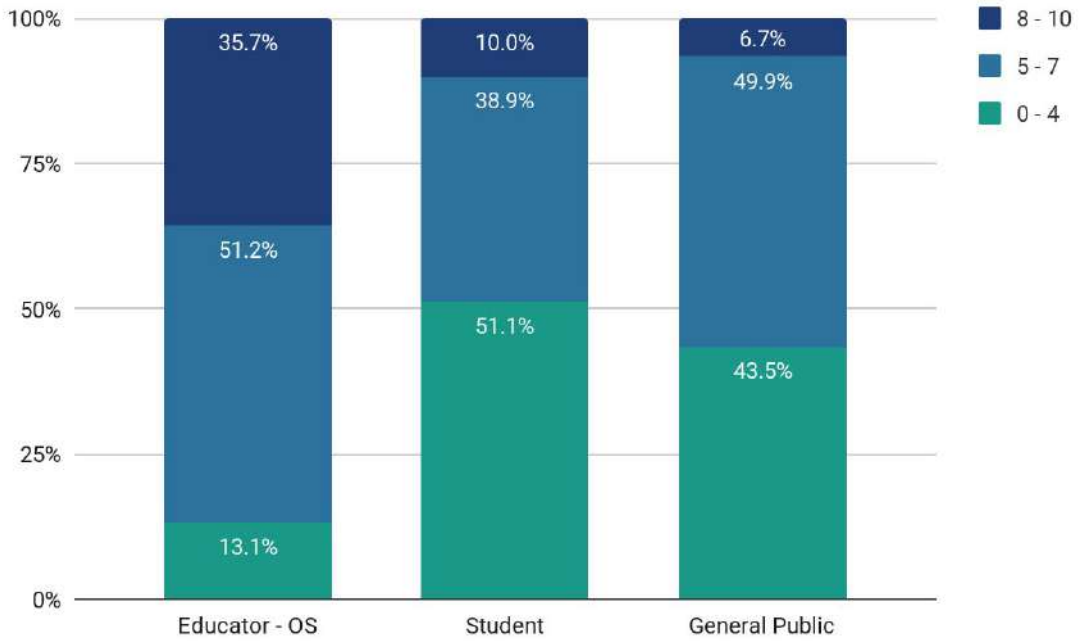
Provincial Results



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

Number of correct responses to 10 climate knowledge questions.

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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.

Manitoba

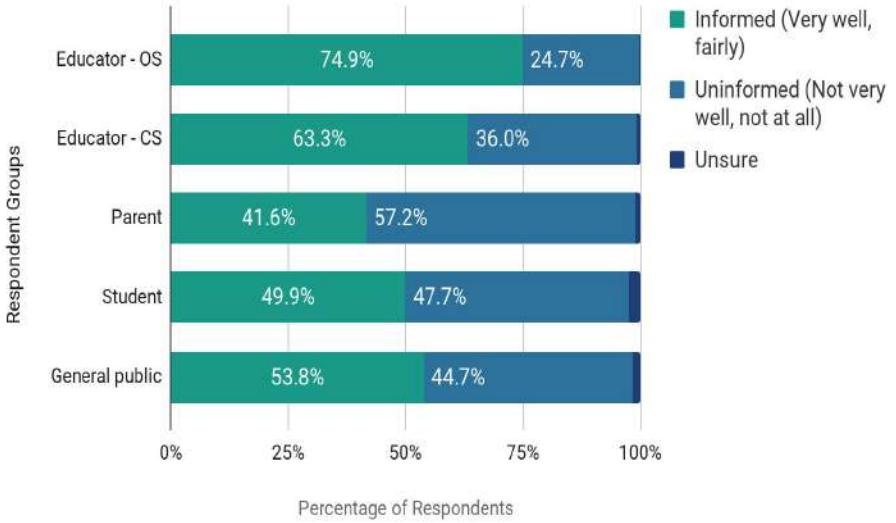
In Manitoba, 36% of open-sample educators were able to answer 8-10 questions correctly. 10% of students and only 7% of the general public were able to correctly answer 8-10 questions correctly. 51% of students and 44% of the general public failed the test.

Notable differences:

Students and open-sample educators in Manitoba had a similar level of success on the ten knowledge questions when compared to the national results, however only 7% of the general public in Manitoba were able to answer 8-10 questions correctly compared to 16% nationally.

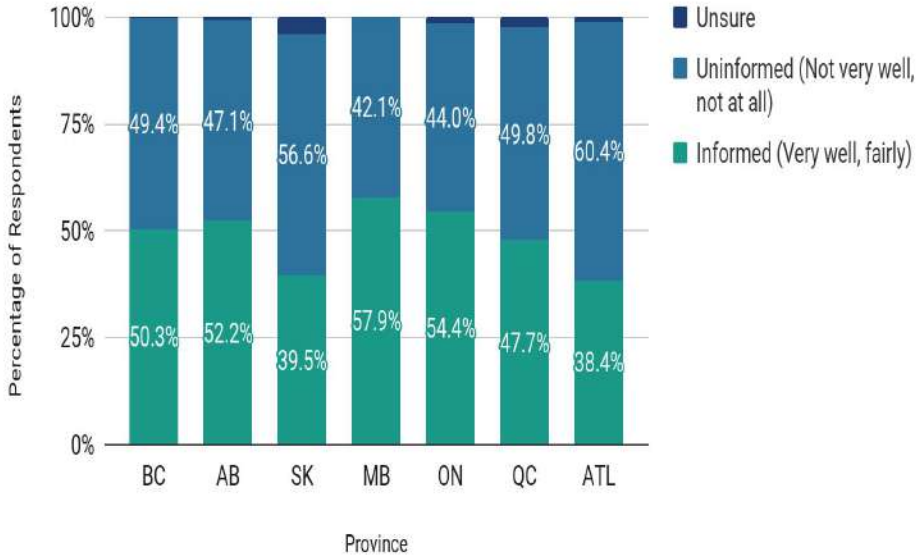
Personally, how well-informed do you feel you are about climate change?

National Results



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

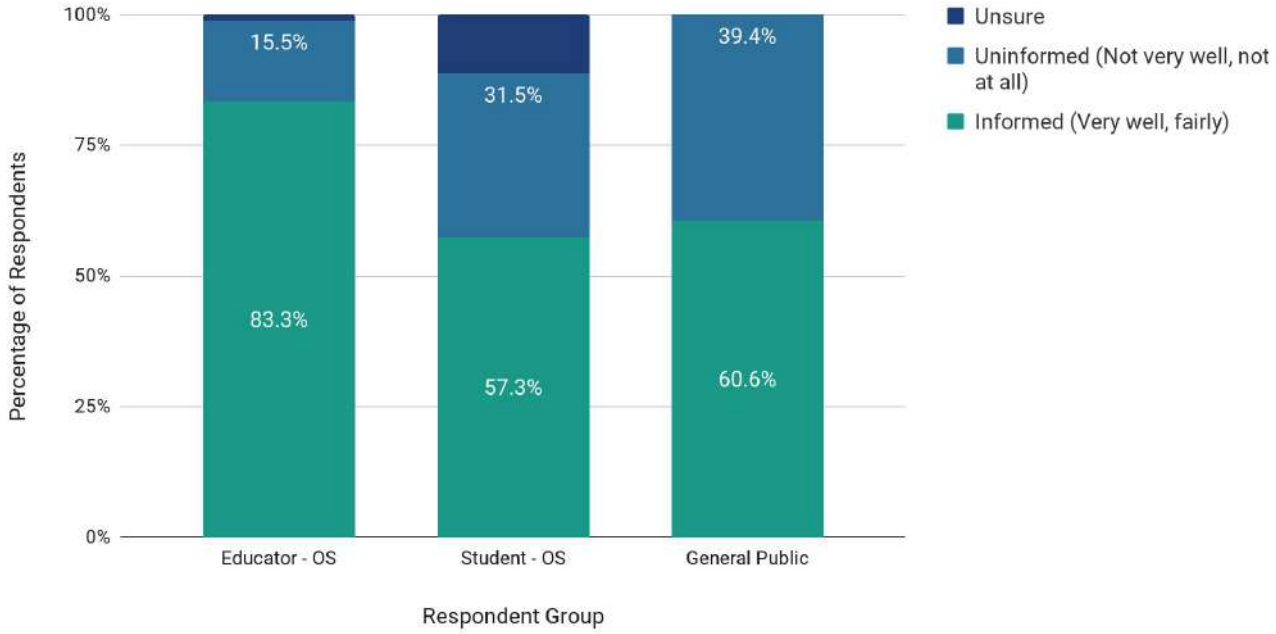
Provincial Results



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?

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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%.

Manitoba

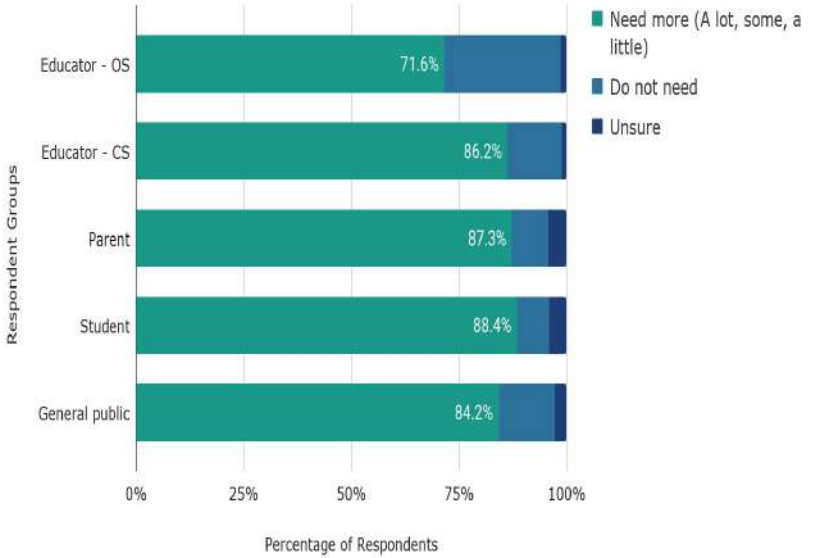
The majority of each respondent group reported feeling fairly or very well informed: open-sample educators = 83%, open-sample students = 57%, and the general public =61%.

Notable differences:

Interestingly, although respondents from the Manitoba general public were slightly less successful on the climate change general knowledge test, they report feeling slightly more informed than the national results: 61% compared to 54%. Open-sample educators and open-sample students also report feeling more informed than the respondents nationally as well: 83% of open sample educators in Manitoba vs. 75% nationally and 57% open same students in Manitoba vs. 50% nationally.

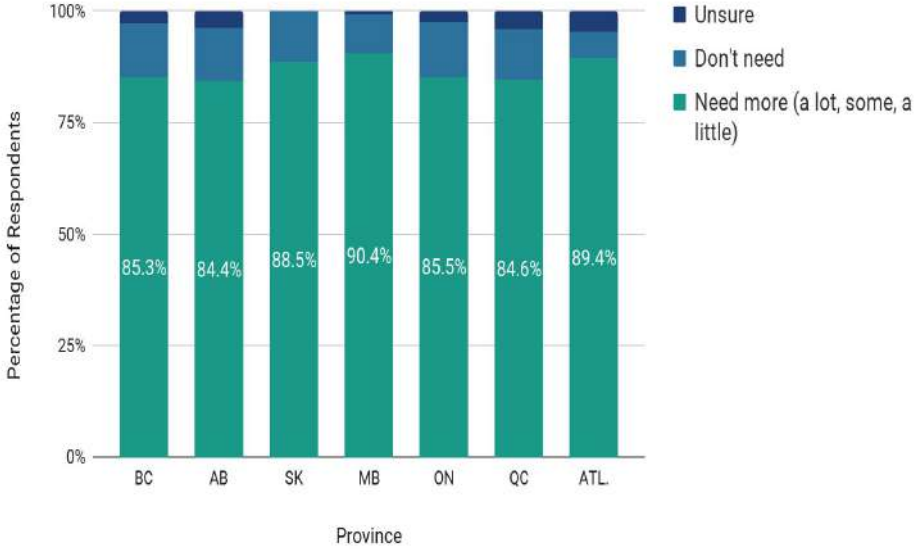
On some issues, people feel they have all the information they need in order to form a firm opinion, while on other issues they would like more information before making up their mind. For climate change, where would you place yourself?

National Results



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

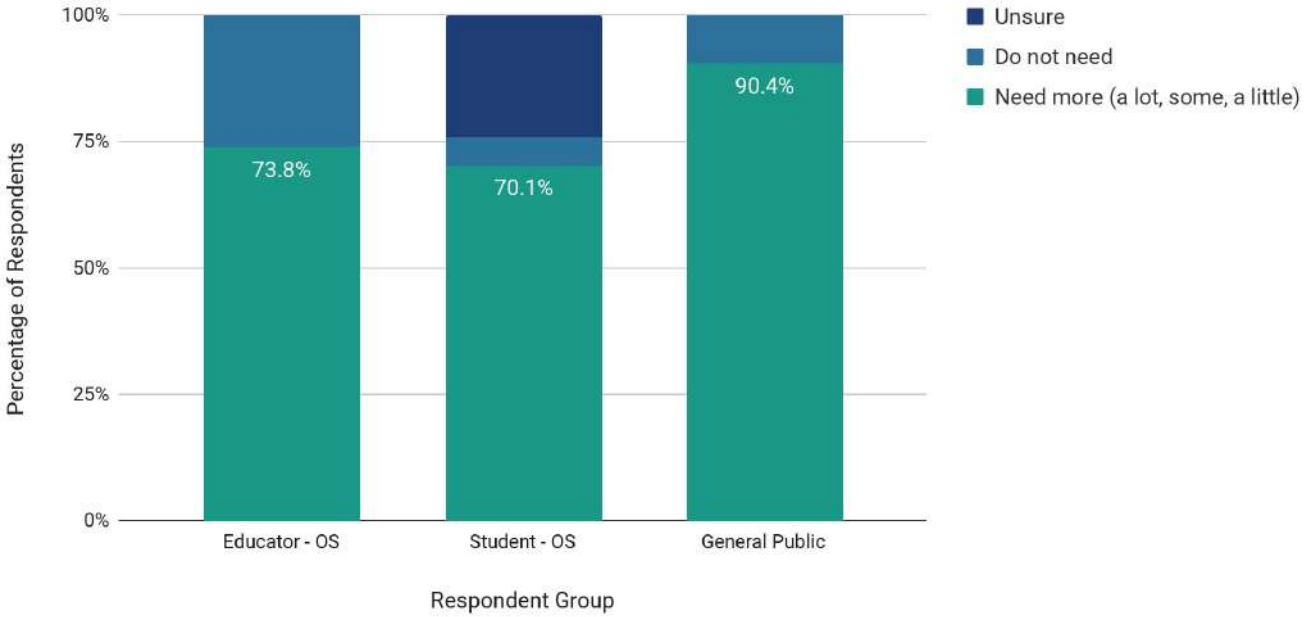
Provincial Results



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

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?

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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 identified that they need more information in order to form a firm opinion on climate change.

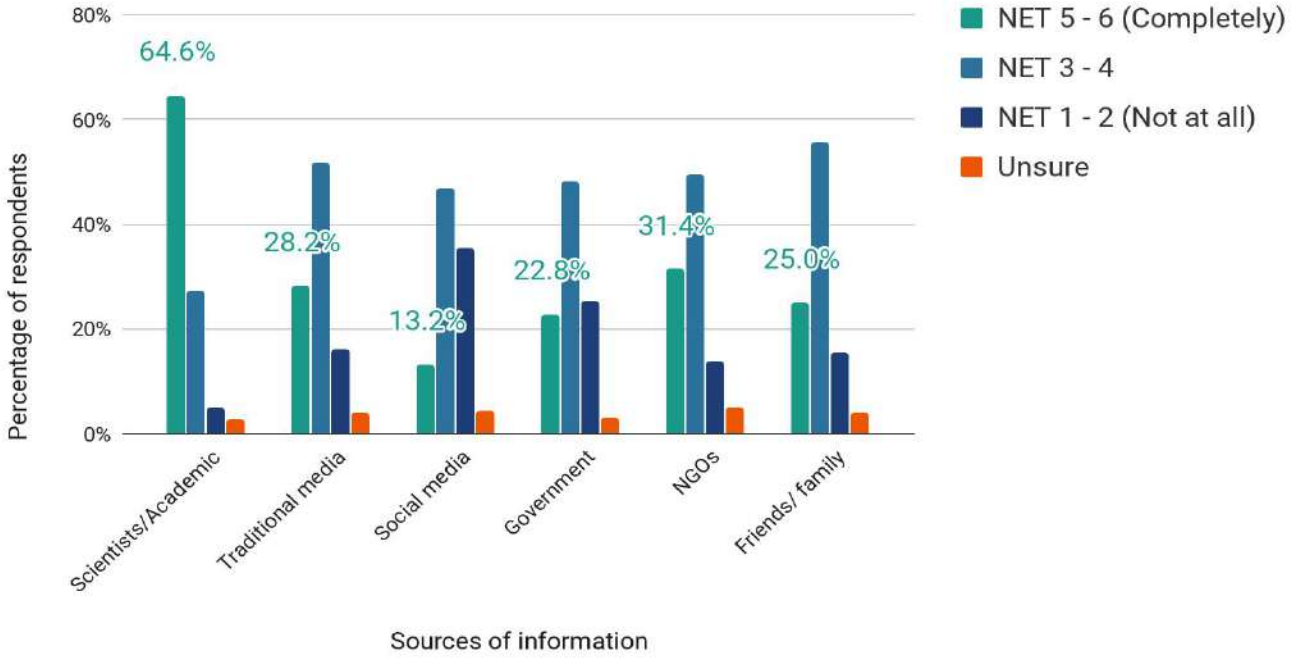
Manitoba

The general public in Manitoba reported overwhelmingly needing more information in order to form a firm opinion (90%), the majority of open-sample educators and students both also reported needing more information, 74% and 70% respectively.

Notable Differences:

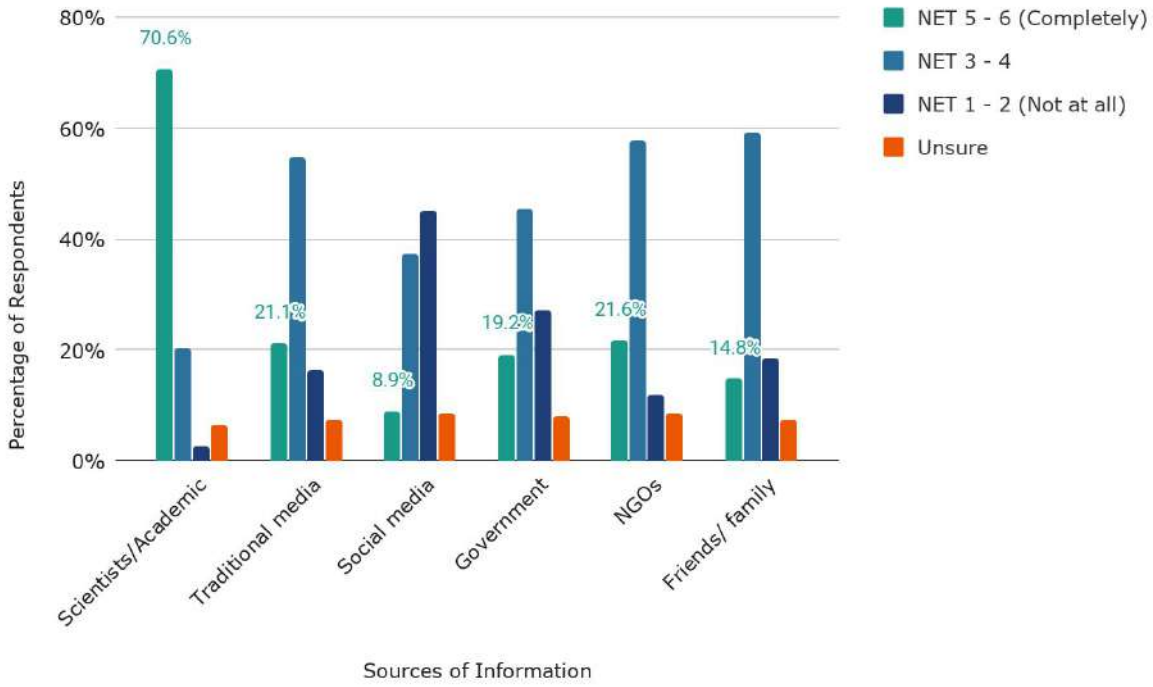
A higher percentage of the general public in Manitoba reported wanting more information to form a firm opinion (90%) compared to the national results from the general public (84%). Almost 25% of students in Manitoba reported being unsure of their response to the question.

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]

Manitoba - Trust in different sources of information



n=220 (Educator OS = 78, Student OS= 95, General public = 47) [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.

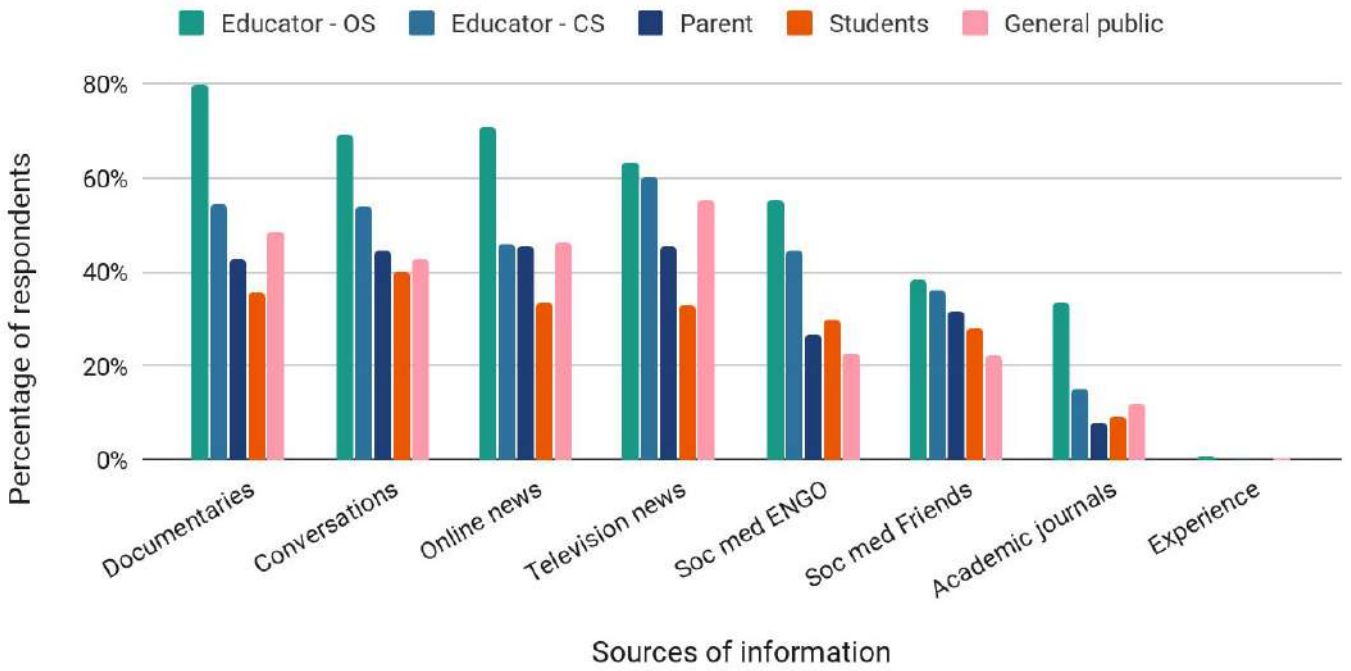
Manitoba

Overwhelmingly respondents in Manitoba hold the strongest amount of trust in scientists and academics (71%) for information about climate change. Other sources level of trust are NGO's at 22%, traditional media at 21%, and 19% for government.

Notable Differences:

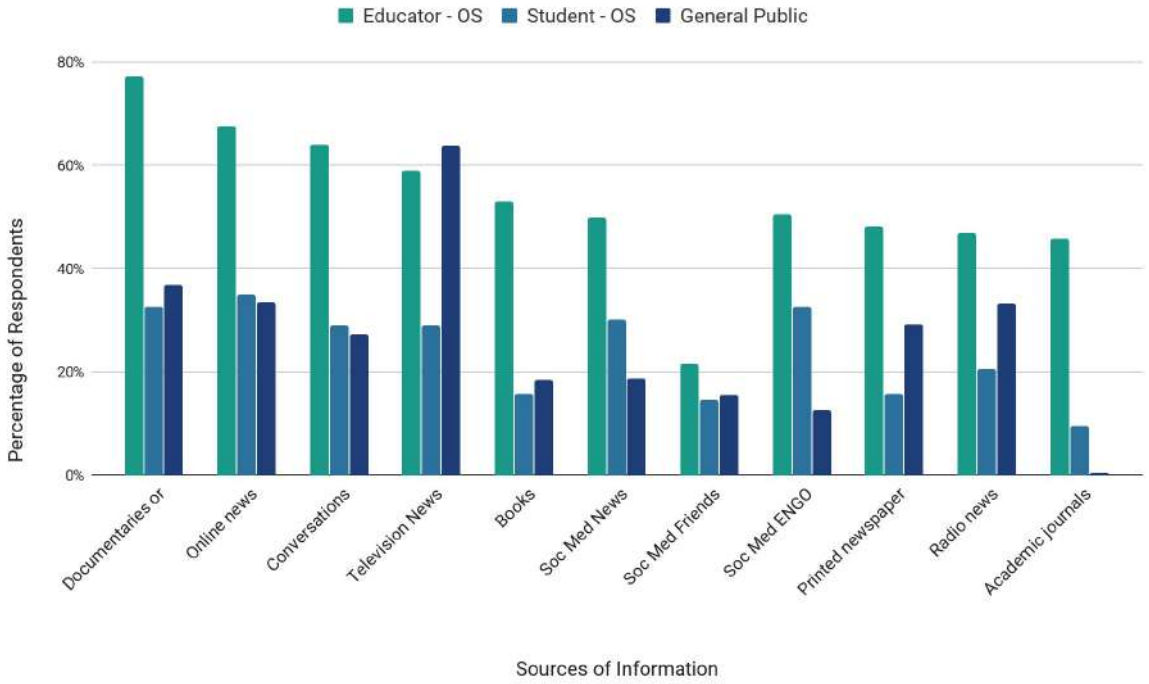
Trust in every information source outside of scientists and academics was lower among Manitoba respondents compared to nationally. This is especially true when it comes to friends and family: 15% trust in Manitoba v. 25% nationally.

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)

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



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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 in the previous slide 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

Manitoba

The top four sources that respondents in Manitoba use to inform themselves about climate change are documentaries, conversations with others, online news and television news. Both groups of educators selected documentaries most often, whereas the general public selected television news 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.

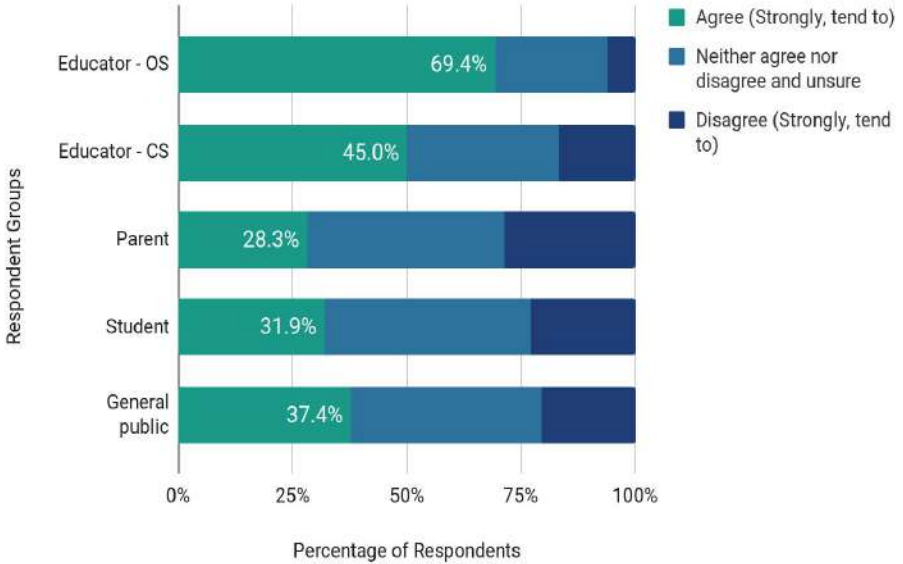
Notable Differences:

There are no distinct differences between the information sources selected by Manitoba respondents compared to the national results.

Impacts and Action

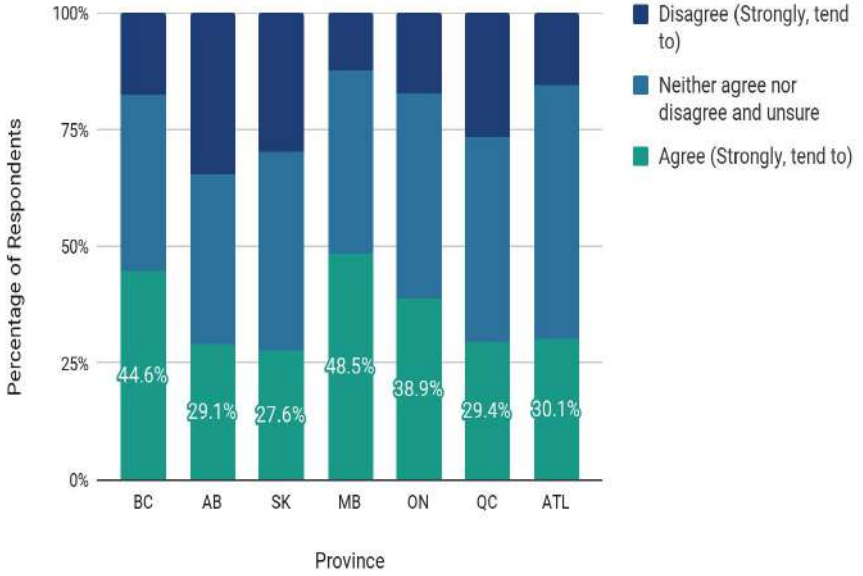
I have personally experienced the effects of climate change

National Results



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

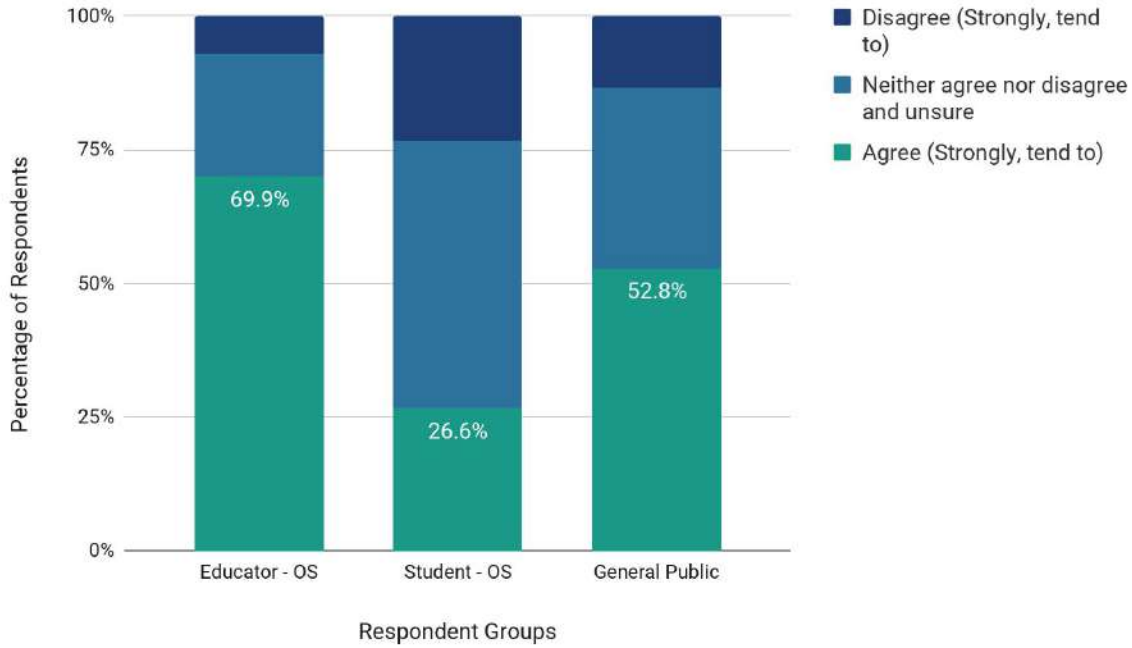
Provincial Results



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

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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%).

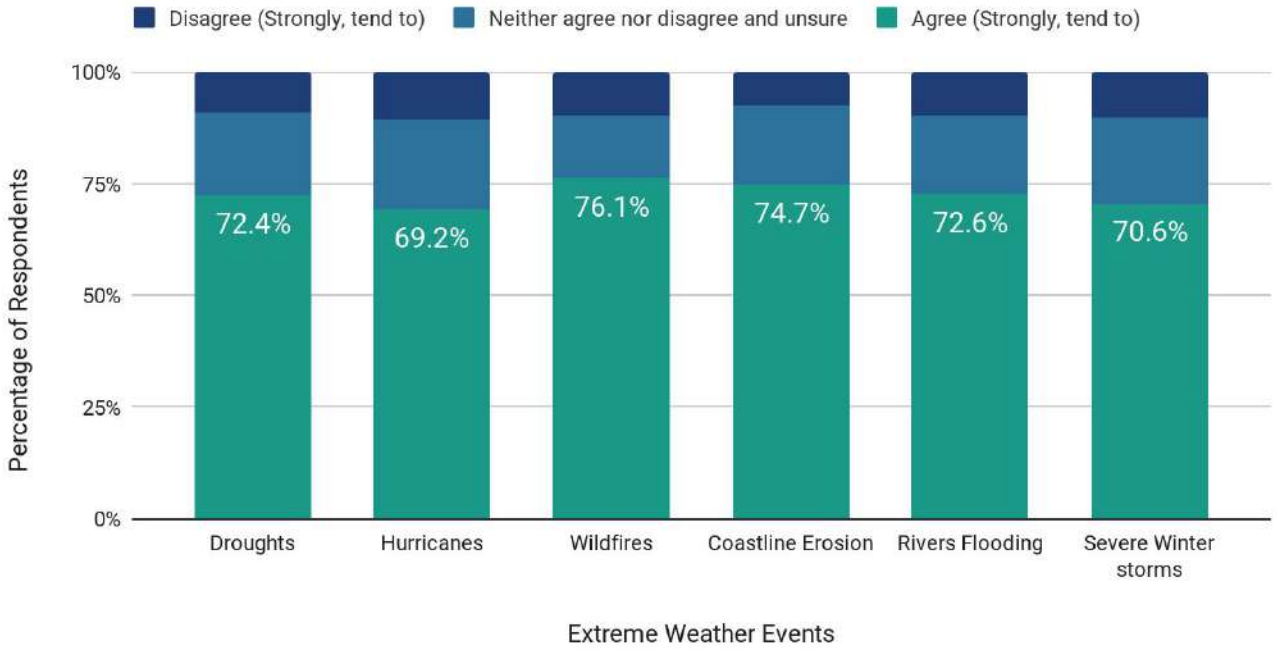
Manitoba

In Manitoba, responses vary about whether or not respondent groups report having personally felt the effects of climate change. 70% of open-sample educators report having felt the effects, just over half (53%) of the general public agreed, and only 27% of open-sample students reported having felt the effects of climate change personally.

Notable differences:

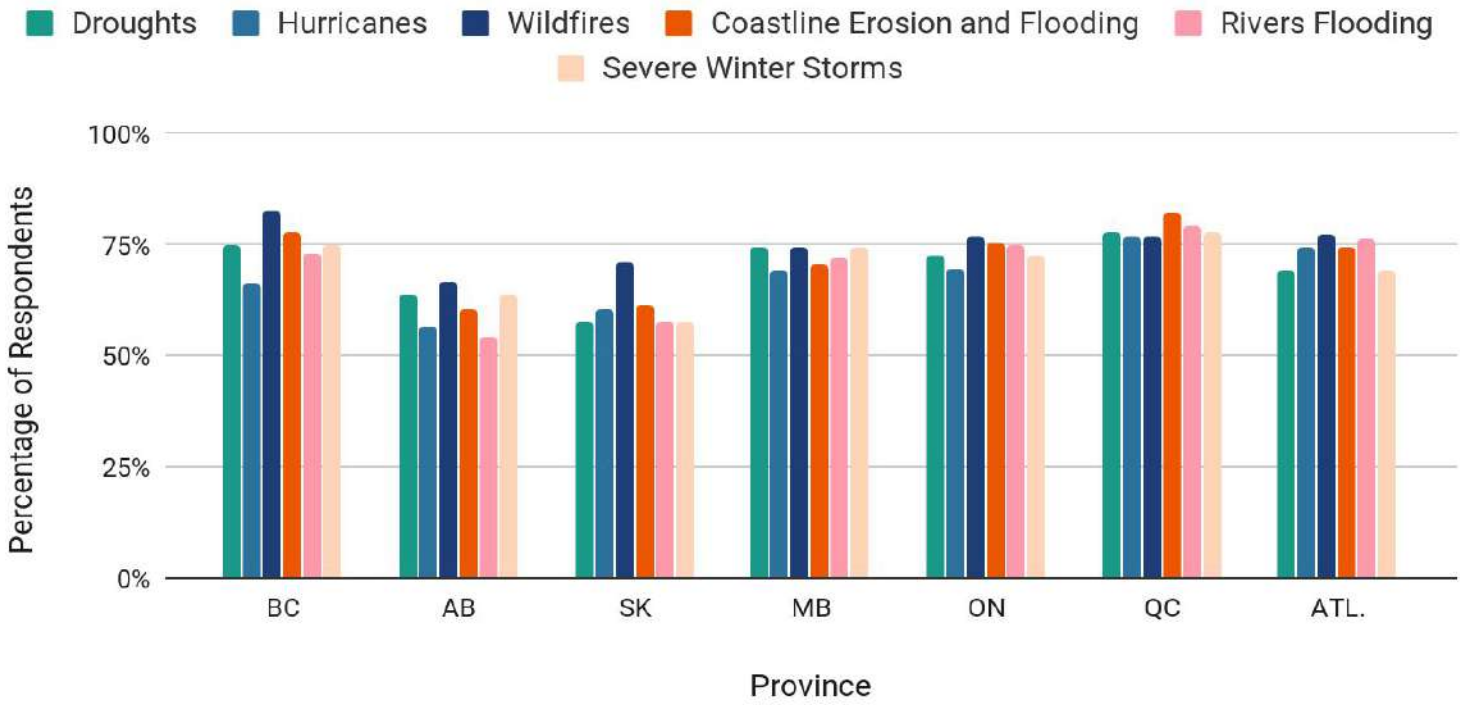
The results are similarly spread amongst Manitoba respondent groups as they are nationally. The only notable difference is among the general public, where 16% more of the general public in Manitoba has reported feeling the effects of climate change (53% compared to only 37% nationally).

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) [aggregated]

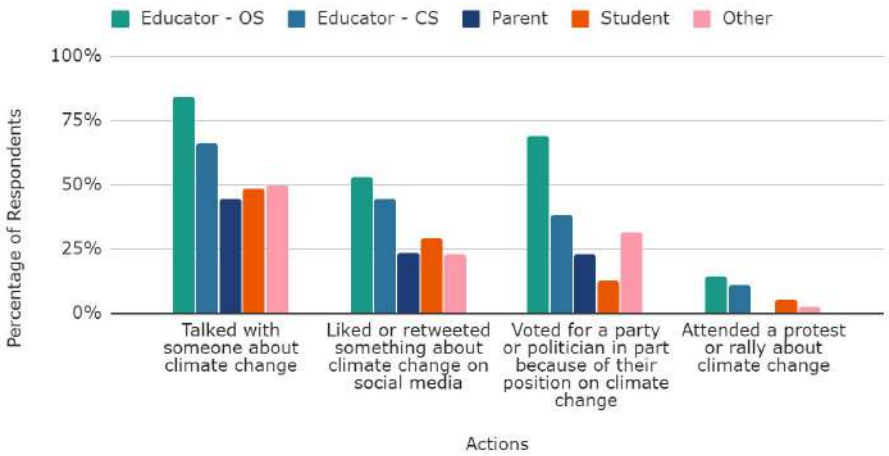
Provincial - Do you agree or disagree that climate change is already causing or making the following things worse: droughts, hurricanes, wildfires, coastline erosion, rivers flooding and severe winter storms?



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

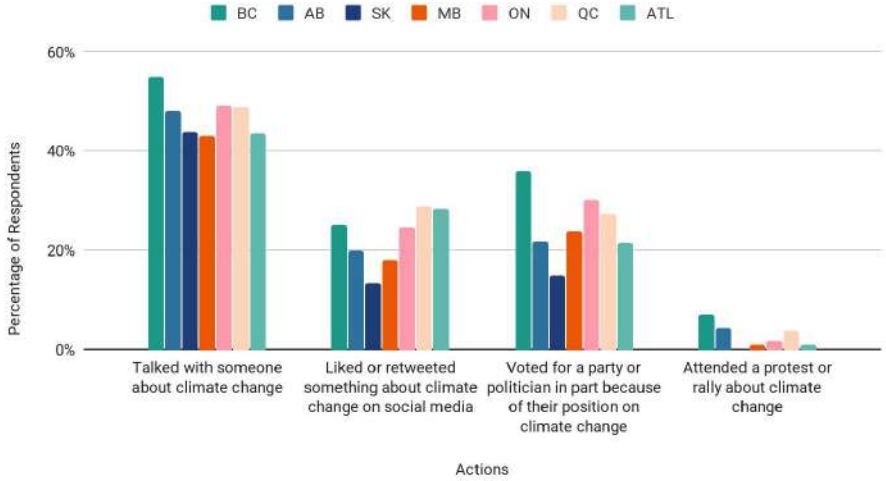
Actions taken to discuss or learn about climate change

National Results



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

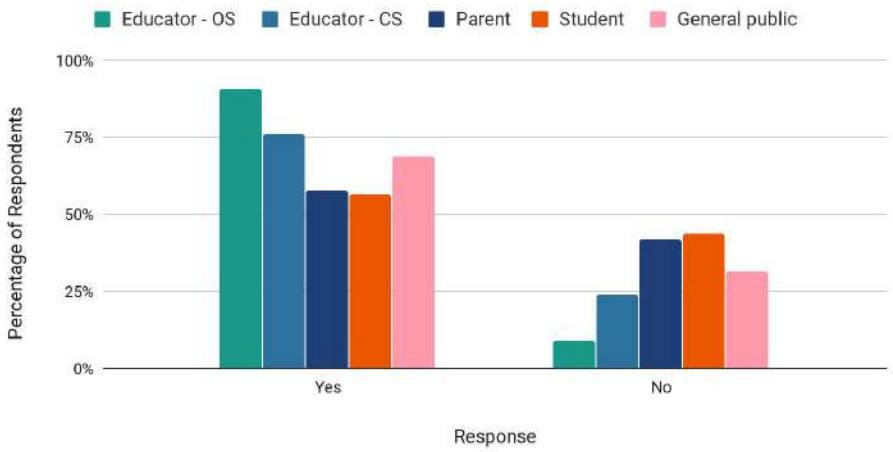
Provincial Results



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

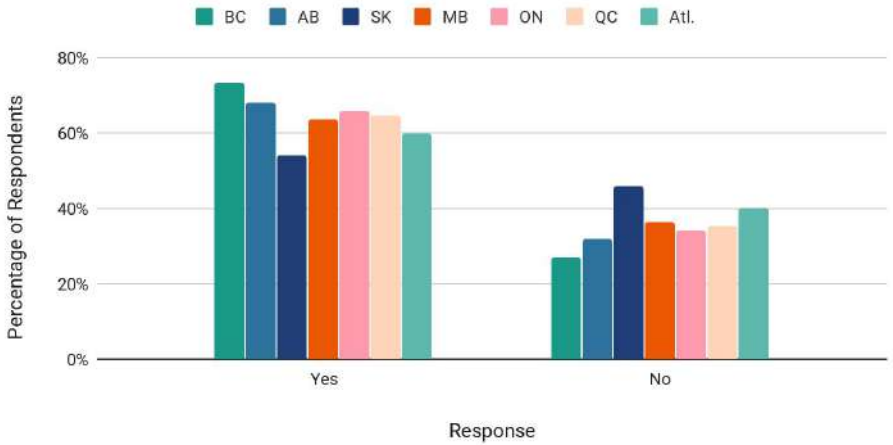
I have personally taken action to reduce greenhouse gas emissions

National Results



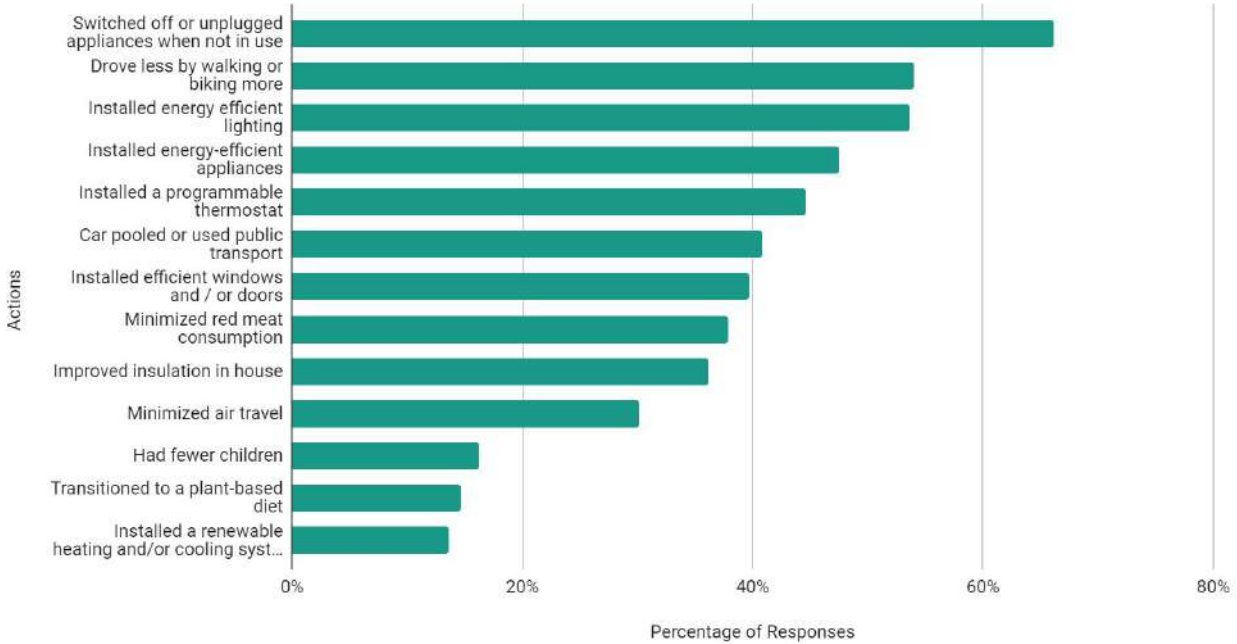
n= 3196 (Educator OS = 1120, Educator CS = 111, Parent CS = 571, General public CS = 908)

Provincial Results



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

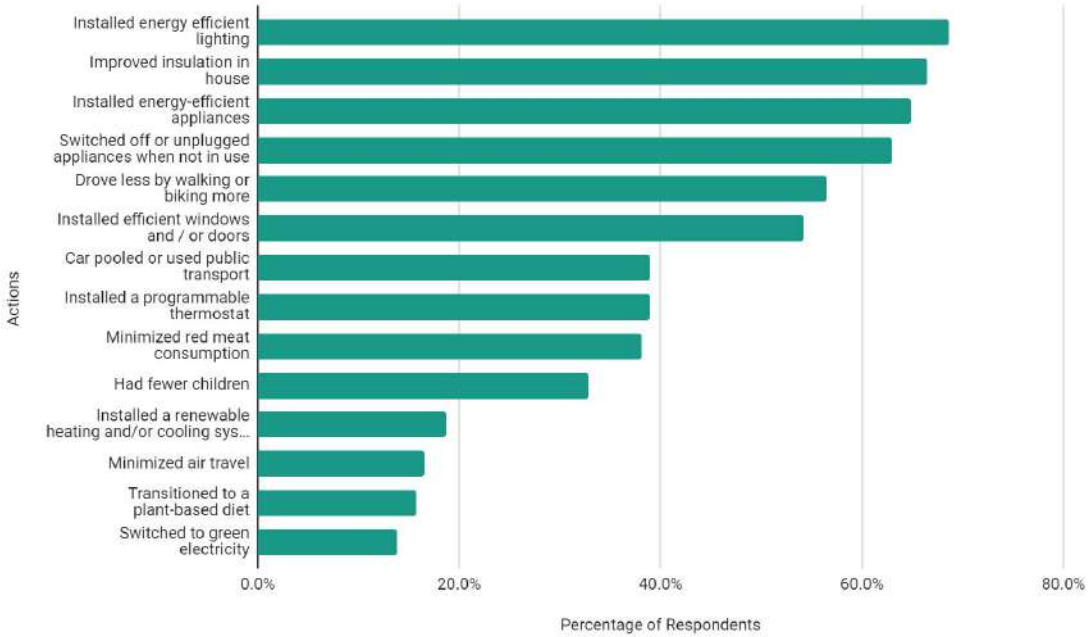
National - I have personally taken action to reduce greenhouse gas emissions



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)

Manitoba - 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=220 (Educator OS = 78, Student OS= 95, General public = 47)

I have personally taken actions to reduce my greenhouse gas use

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.

Manitoba

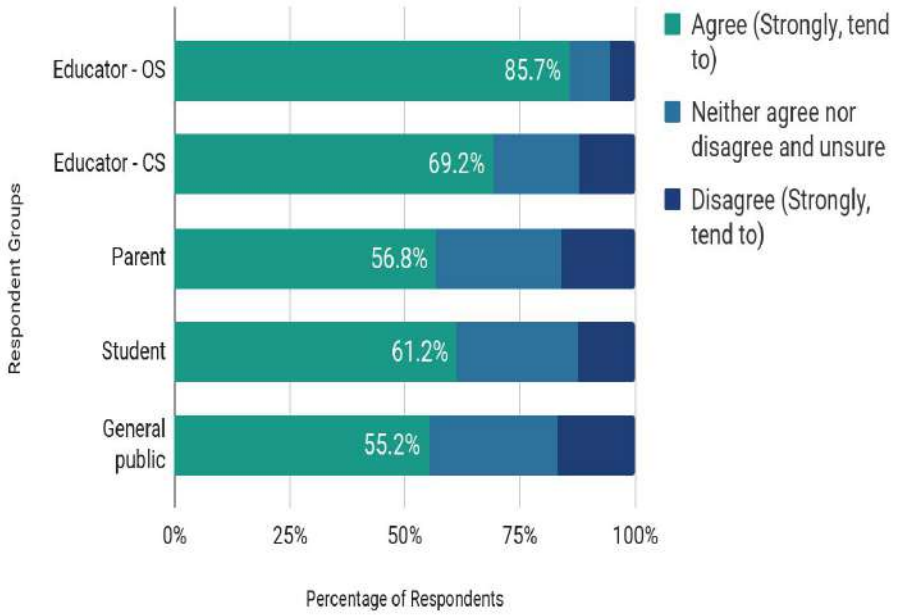
The top five actions reported by Manitobans to reduce GHG's were: installed energy efficient lighting, improved insulation in house, installed energy efficient appliances, switch off or unplug appliances when not in use, drove less by walking or biking more. Switching to green electricity and transitioning to a plant-based diet were selected least often by Manitoba respondents.

Notable differences

Four of the top five actions listed in Manitoba overlap with the national results but in a different order. The top action selected nationally, "I switched off or unplugged appliances", was the fourth most reported action in Manitoba. The two differences in the top actions include: the second most common action reported by Manitobans was improving the insulation in their house which was reported much less often in the national results (9th). The second difference: the fifth most selected action nationally was "I installed a programmable thermostat" which is only the 8th most reported action in Manitoba.

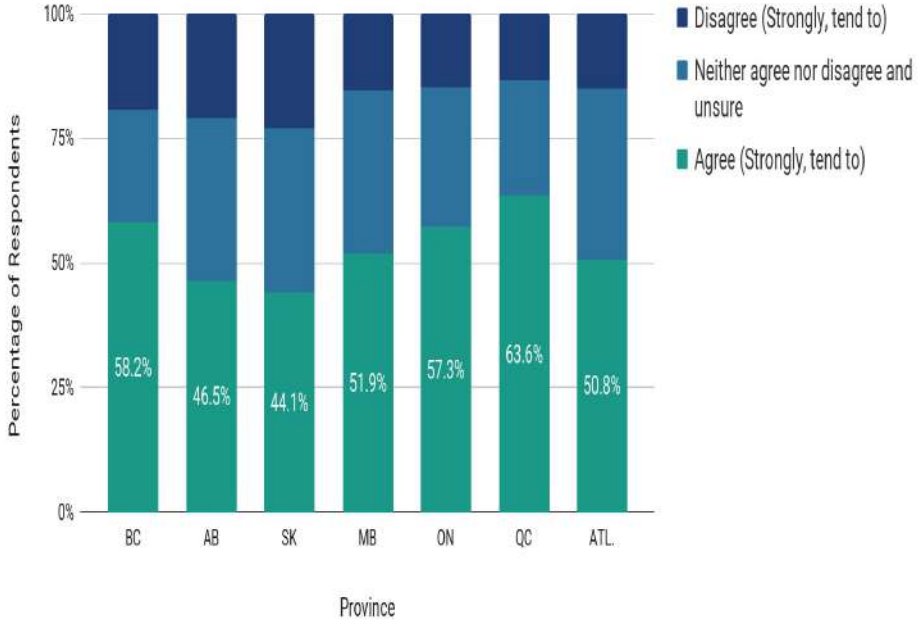
I believe my actions have an influence on climate change.

National Results



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

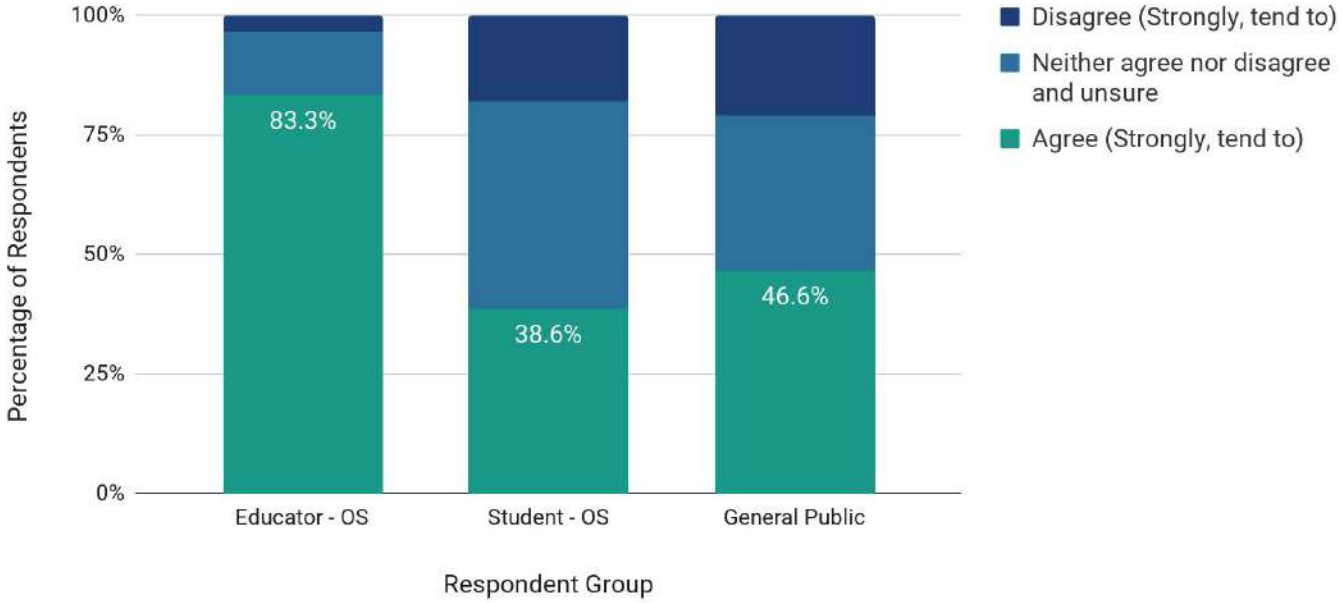
Provincial Results



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.

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

I believe my actions have an influence on climate change.

National

Respondent groups differed significantly 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 conviction 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.

Manitoba

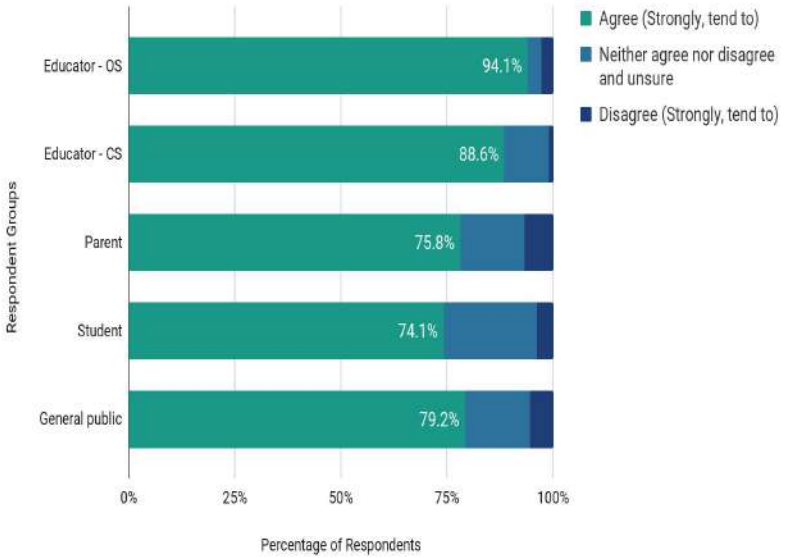
There is a large difference in Manitoba about whether respondents feel that their actions have an influence on climate change. A large majority (83%) of open-sample educators feel that their actions have an influence on climate change compared to less than half of both the general public (47%) and open-sample students (39%).

Notable differences:

Students and the general public in Manitoba feel less convinced overall that their personal actions are influential in the fight against climate change. 8% fewer members of the general public in Manitoba responded feeling as though their actions have an influence compared to the national results (47% compared to 55%). There is also a difference between students' responses nationally (61%) compared to Manitoba (39%) with a 22% difference.

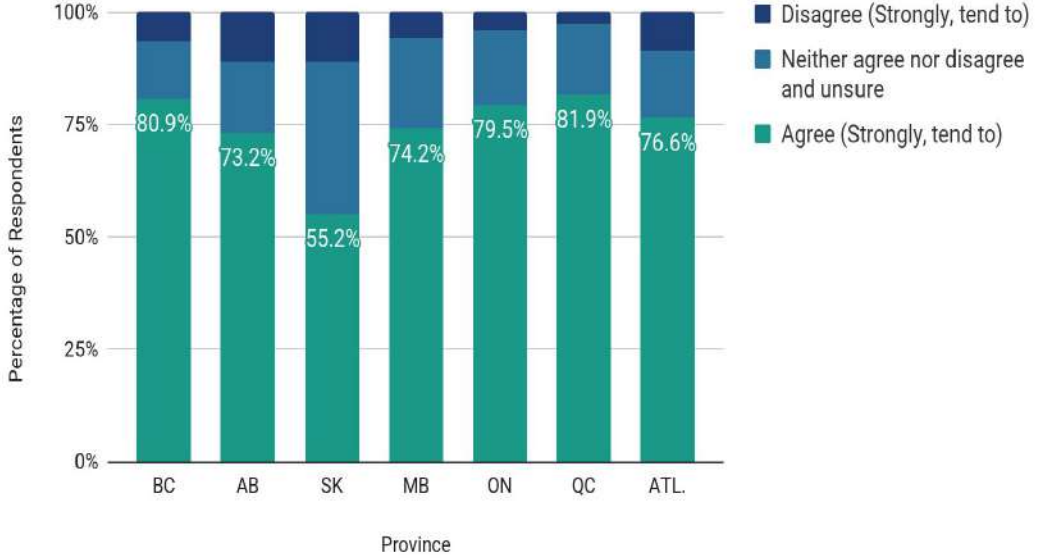
I understand personal actions are important but systemic change is required to address climate change challenges.

National Results



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

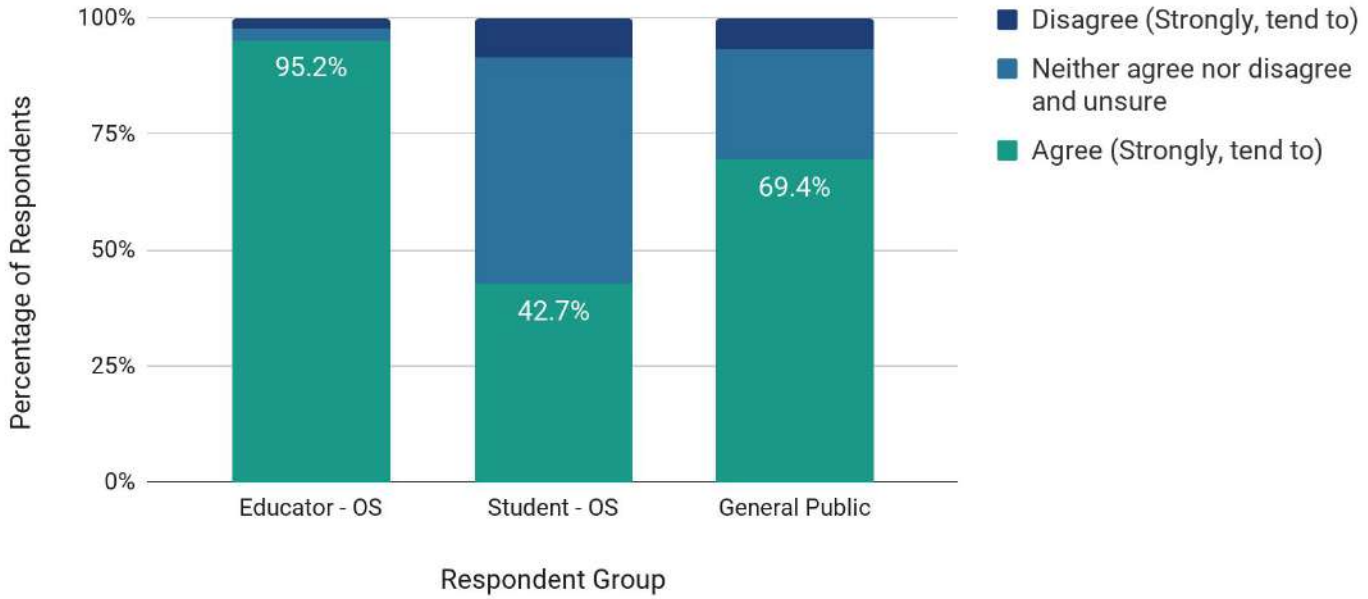
Provincial Results



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.

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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.

Manitoba

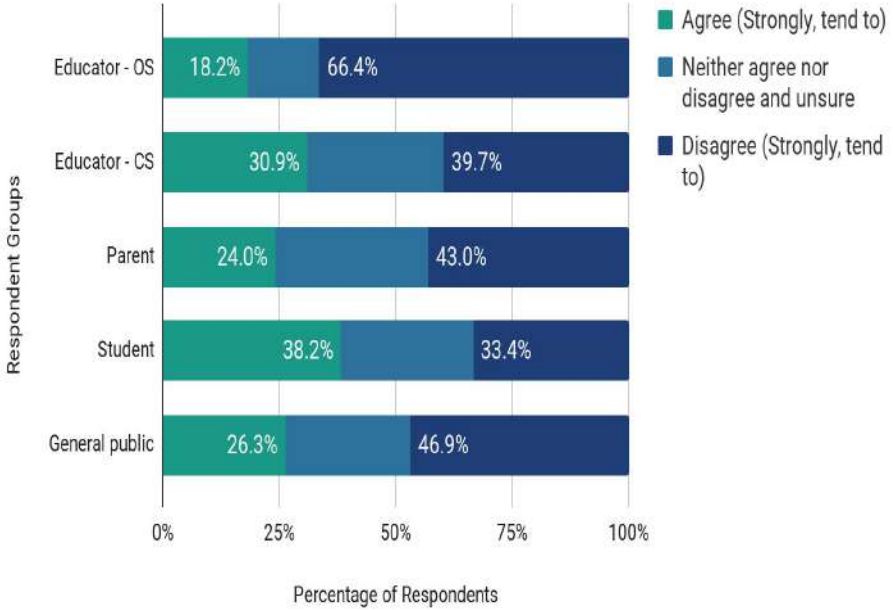
Responses in Manitoba were highly variable. Open-sample educators overwhelmingly agree that systematic change is important to address the challenges of climate change (95%). On the other hand, less-than-half of open-sample students consider systematic change essential to combat climate change challenges (43%). The Manitoba general public falls in between, with the majority agreeing with the importance of systematic change (69%)

Notable differences:

10% fewer respondents from the general public in Manitoba agree that systematic change is required to combat climate change (69%) compared to 79% nationally. Open-sample students have a much lower level of agreement compared to the closed-sample students nationally (31% lower).

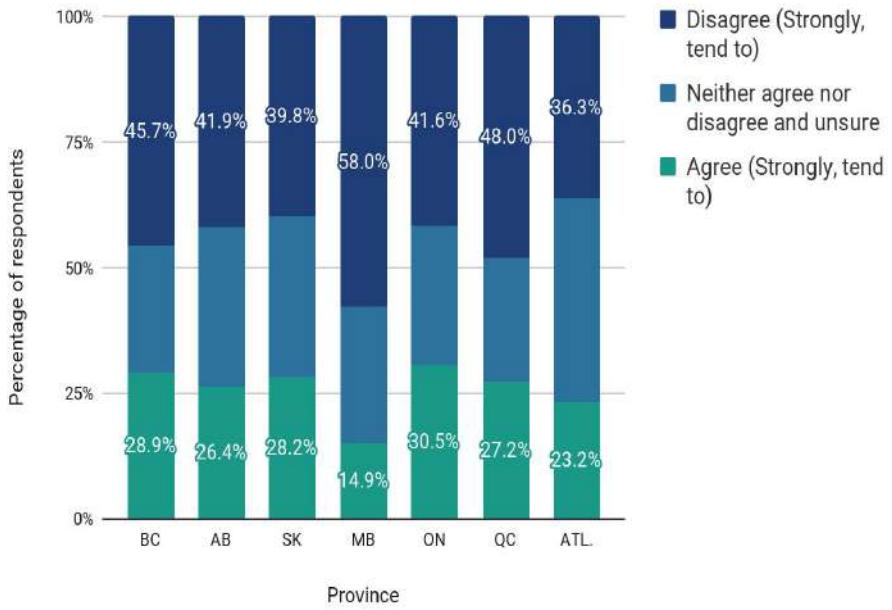
New technologies can solve climate change without individuals having to make big changes in their lives.

National Results



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

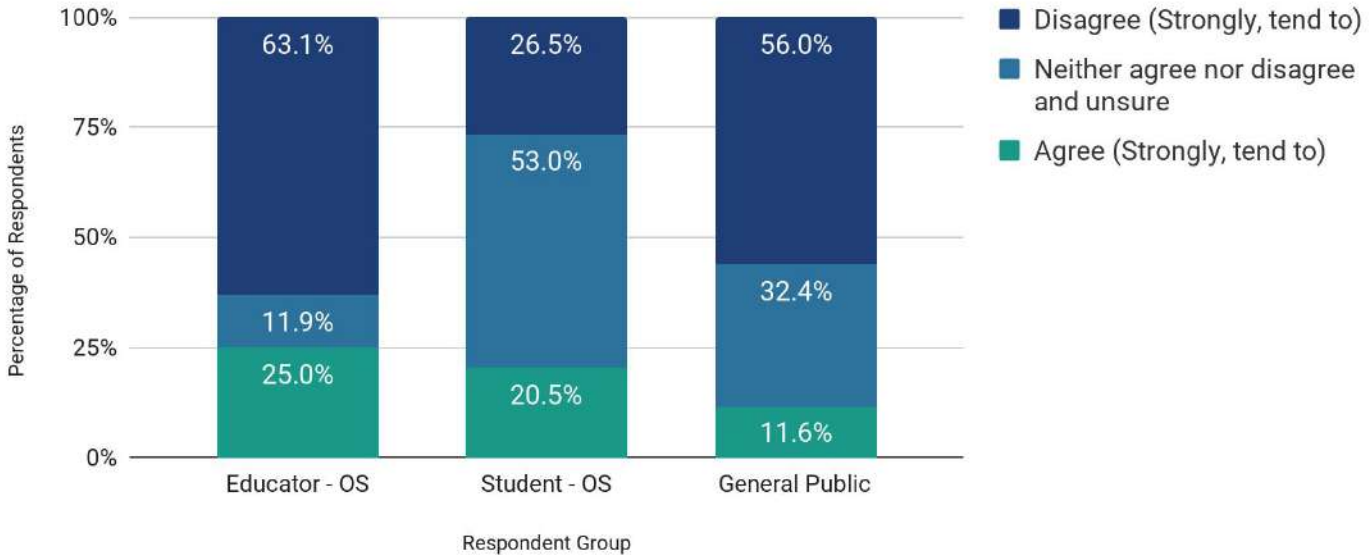
Provincial Results



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.

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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%)

Manitoba

Responses vary widely across and within respondent groups in Manitoba. A majority of the open-sample educators (63%) and the general public (56%) disagree that new technologies alone will solve climate change without humans having to make any significant changes. Only 27% of students are aligned with this perspective, and the majority neither agree or disagree or are just unsure (53%).

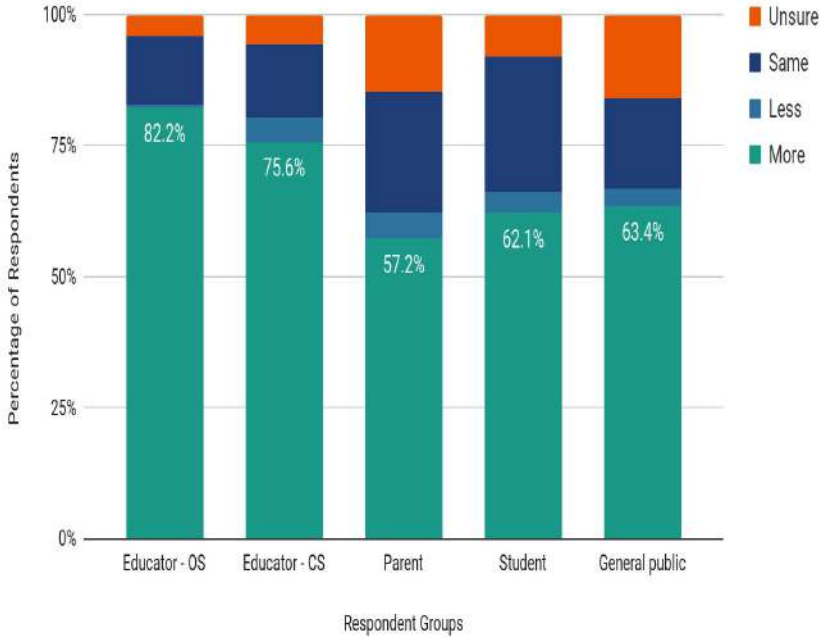
Notable differences:

A lower percentage of students in Manitoba agree that climate change can be solved by technology alone without humans having to make significant changes in their lives (21%) compared to students nationally (38%). There is a similar difference when looking at responses from the general public. Only 12% of the general public in Manitoba agree with this statement compared to 26% nationally.

Climate Change & The Education System

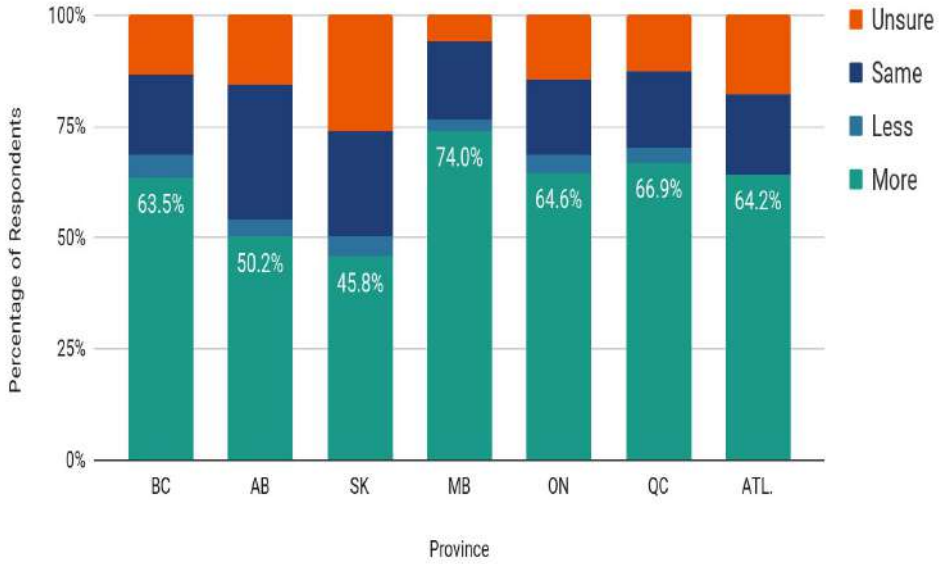
Do you think the education system (grades 7 - 12) should be doing more, less, or about the same as now to educate young people on climate change?

National Results



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

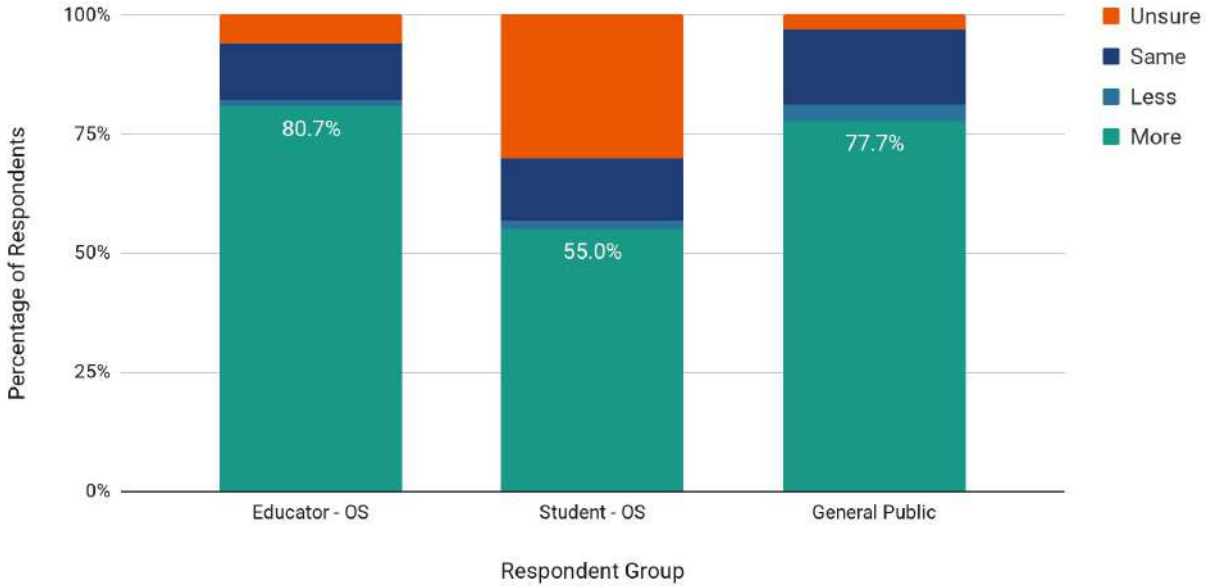
Provincial Results



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?

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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 (OS 82% and CS 76%) strongly believe that the formal education system (grades 7-12) should be doing more to educate young people about climate change (82% and 76%). Approximately two-thirds of students (62%) and members of the 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.

Manitoba

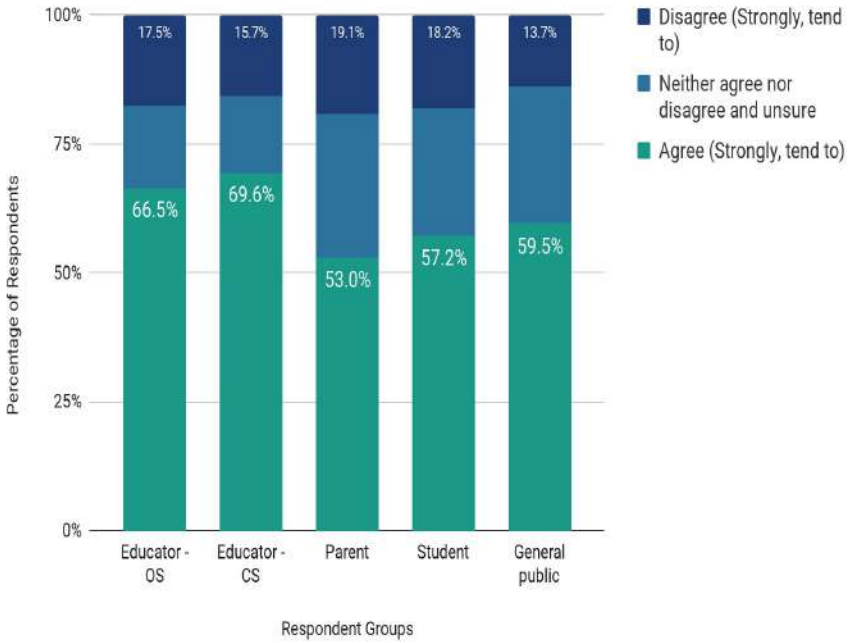
A large majority of open-sample educators (81%) and the general public in Manitoba (78%) believe that the education system should be doing more to educate young people about climate change. Students agree to a lesser extent, with 55% agreeing that the education system should be doing more.

Notable differences:

In Manitoba, respondents from the general public feel more strongly that the education system should be doing more (78%), compared to the national results (63%). There is also a notable difference between student responses, students in Manitoba feel less strongly that the education system should be doing more (55%) compared to nationally (62%).

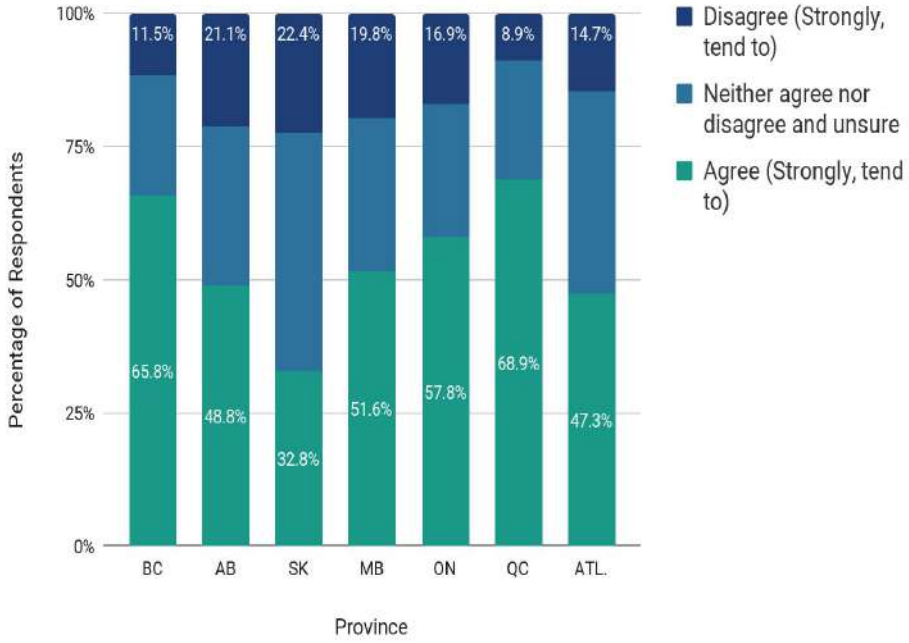
Climate change education is a high priority for schooling

National Results



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

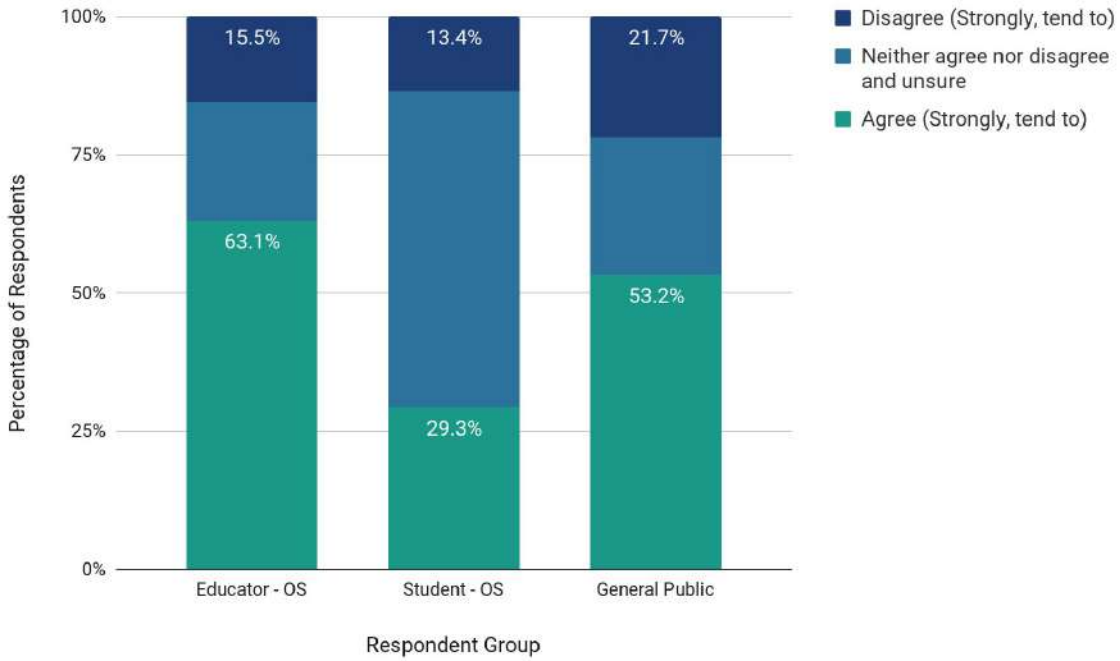
Provincial Results



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

Manitoba Results



n=220 (Educator OS = 78, Student OS= 95, General public = 47)

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.

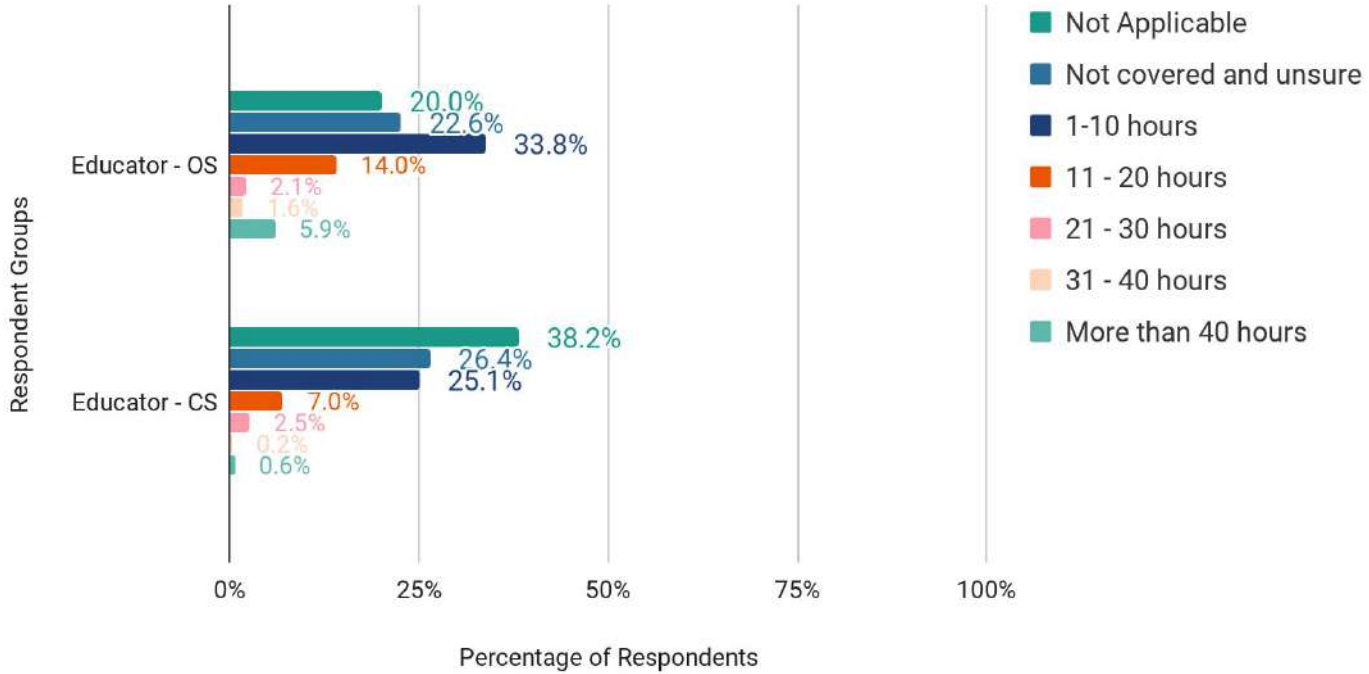
Manitoba

Among Manitoba respondent groups, open-sample educators were most in agreement that climate change is a high priority for schooling, with 63% strongly or tending to agree. Just over half of the general public agreed (53%) compared to less than one-third of students (29%).

Notable differences:

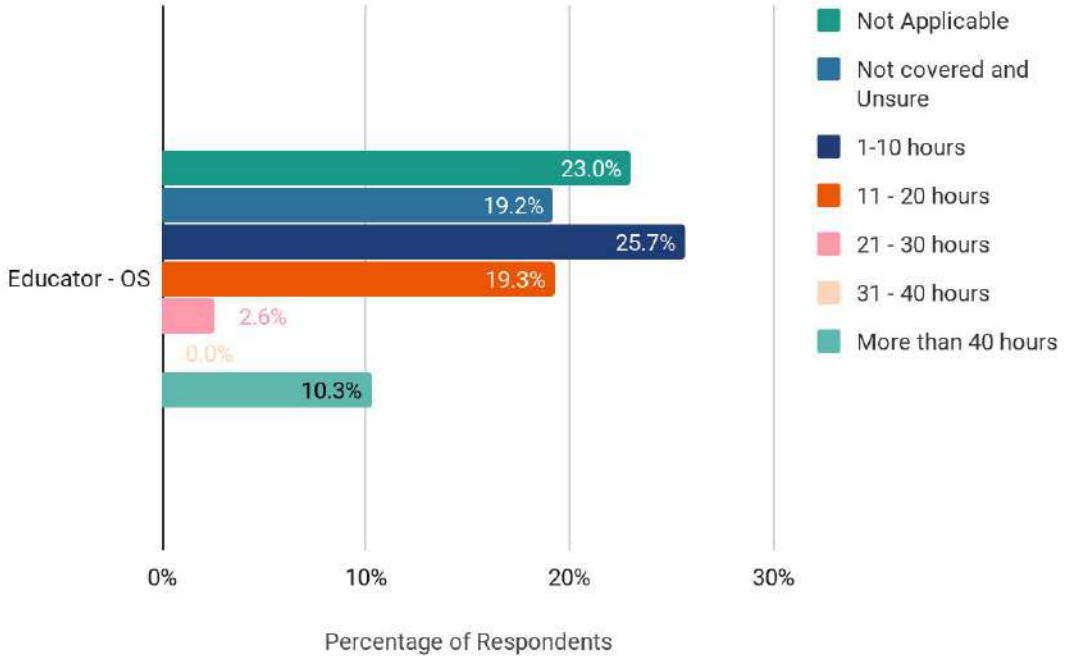
Responses from educators in Manitoba are similar to national responses. Manitoba's general public agreed 7% less often than the national results. The most notable difference; however, is among students. In Manitoba, the rate of agreement is almost 20% lower than the national results: 29% compared to 57%.

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)

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



n=78 (Educator OS = 78)

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).

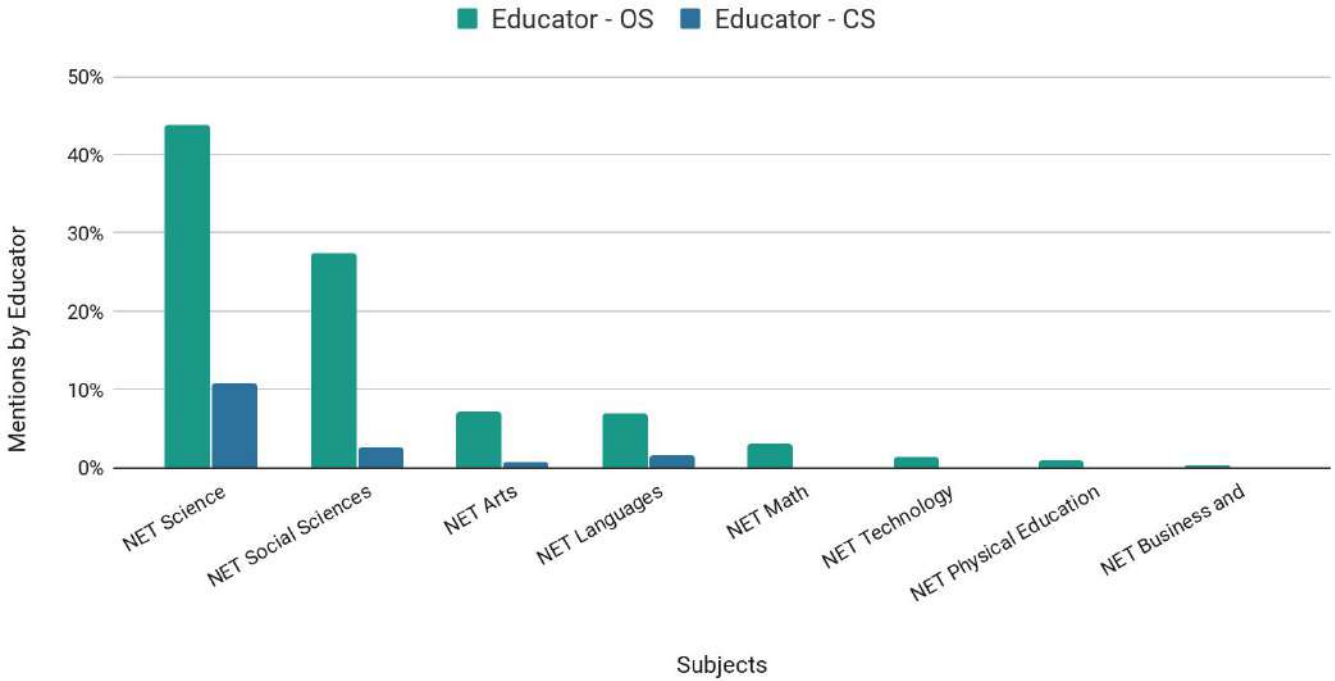
Manitoba

In response to the question about how many hours a semester or year would you focus on climate change, 23% of open-sample educators responded not applicable, and 19% responded not at all or unsure (42% in total). Among educators who covered at least some climate change, 26% spent between 1 and 10 hours, 19% spent between 11 and 20 hours, 3% spent between 21-30 hours, none spent between 31-40, and 10% reported spending over 40 hours.

Notable differences

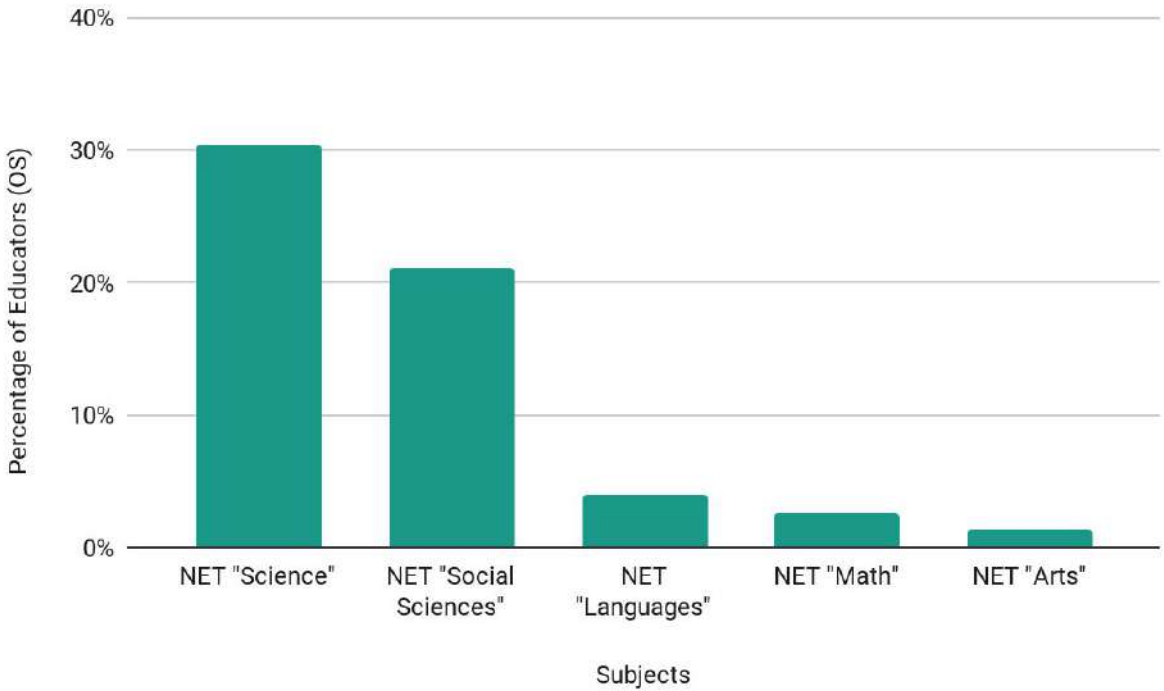
A similar percentage of open-sample educators in Manitoba selected not applicable or not covered or unsure as the national open-sample (around 42%). Fewer educators in Manitoba (26%) selected between 1-10 compared to nationally (34%). Slightly more educators in Manitoba selected either 11-20 hours as well as more than 40 hours compared to the national results. The data ranges in between (21-30 and 31-40) align.

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



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

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



n=78 (Educator OS = 78)

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 named, if named at all.

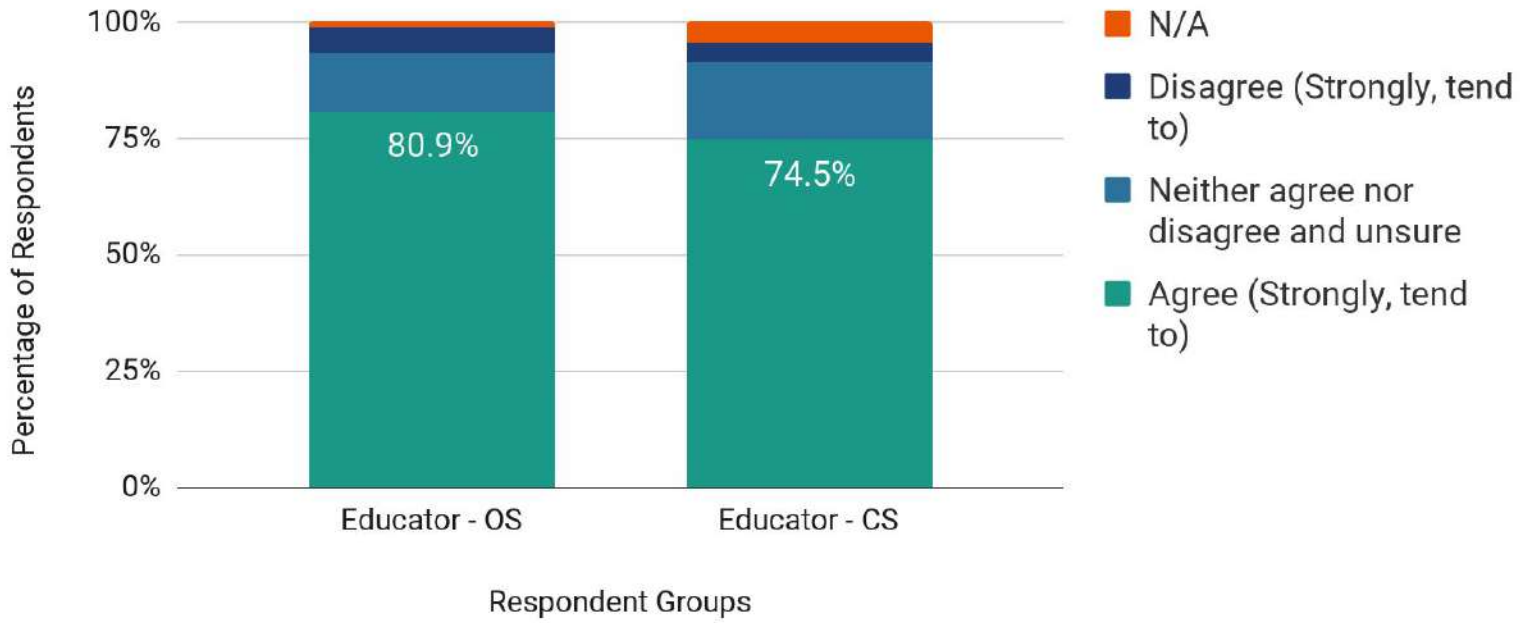
Manitoba

When asked which subjects (if any) climate change education is integrated into, Manitoba teachers cited science-related subjects most often, followed by social sciences, languages, arts and then math.

Notable Differences

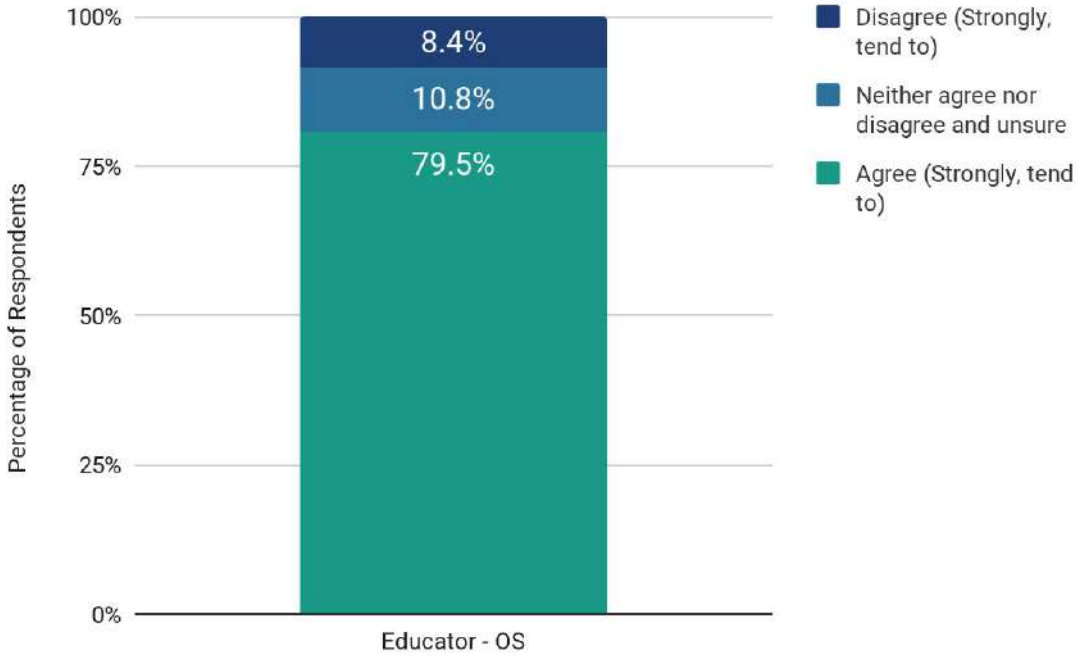
Science and social sciences were chosen most often by educators in Manitoba and among national educators. Nationally, arts is mentioned more often than language and math compared to Manitoba where teachers report being more likely to include climate change education into language and math before arts.

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



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

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



n=78 (Educator OS = 78)

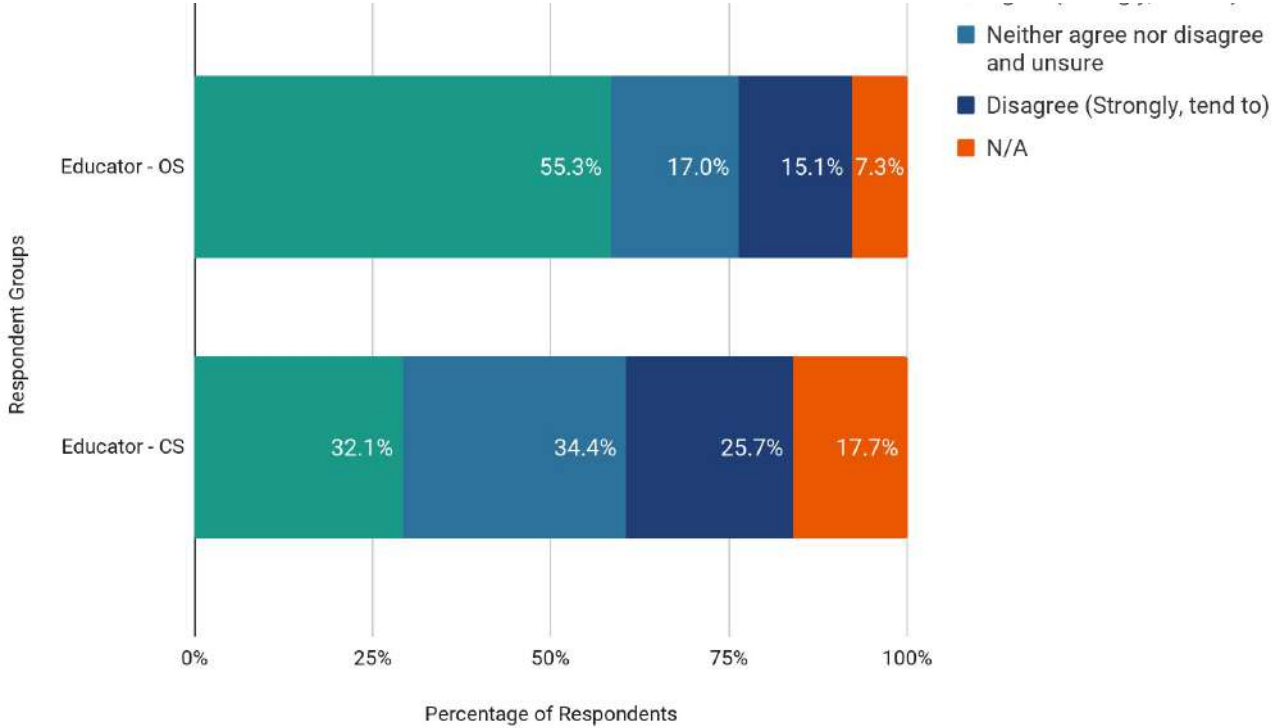
I believe climate change education is the role of all teachers

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

Manitoba
80% of open sample educators in Manitoba believe that climate change education is the role of all teachers.

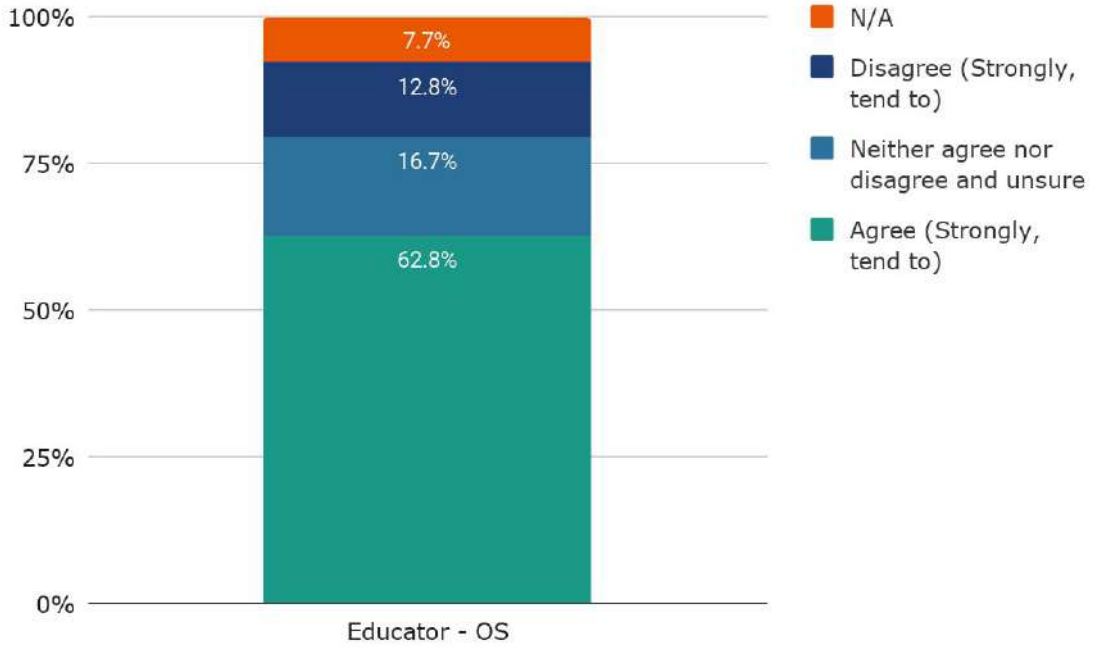
Notable Differences:
Similar data trends in Manitoba and nationally.

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



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

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



n=78 (Educator OS = 78)

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%).

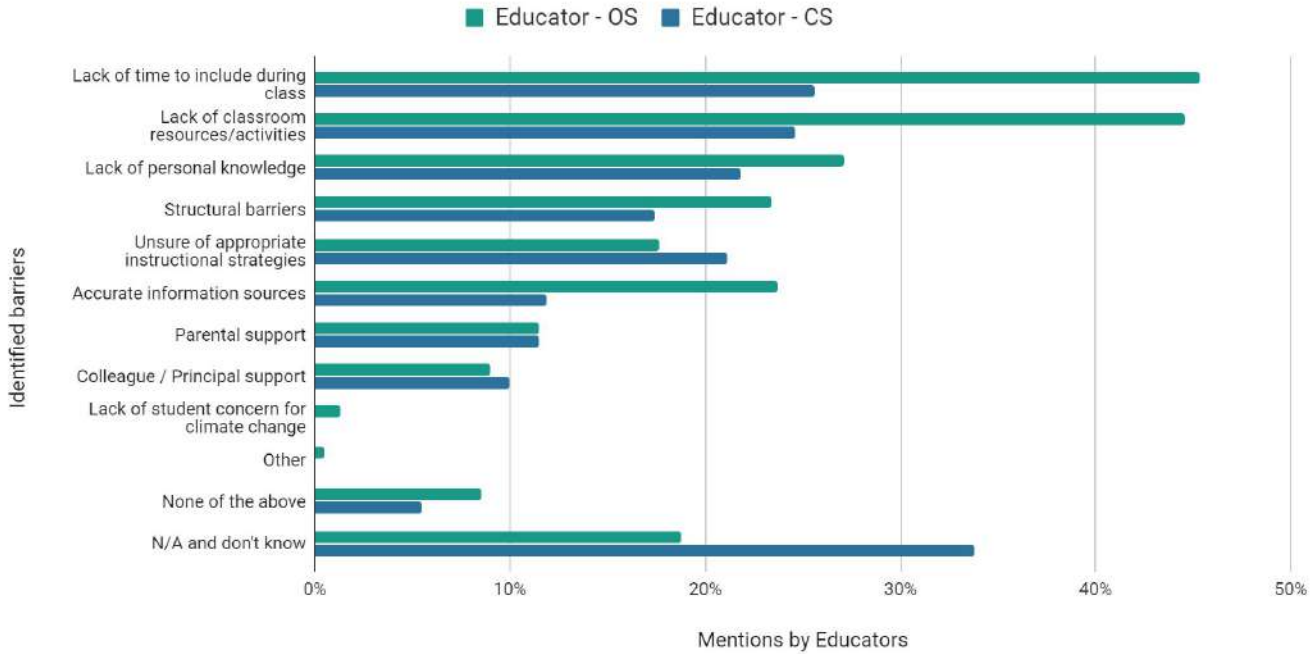
Manitoba

Almost two-thirds of Manitoba educators (62%) feel confident in their knowledge and skills to teach climate change education.

Notable differences:

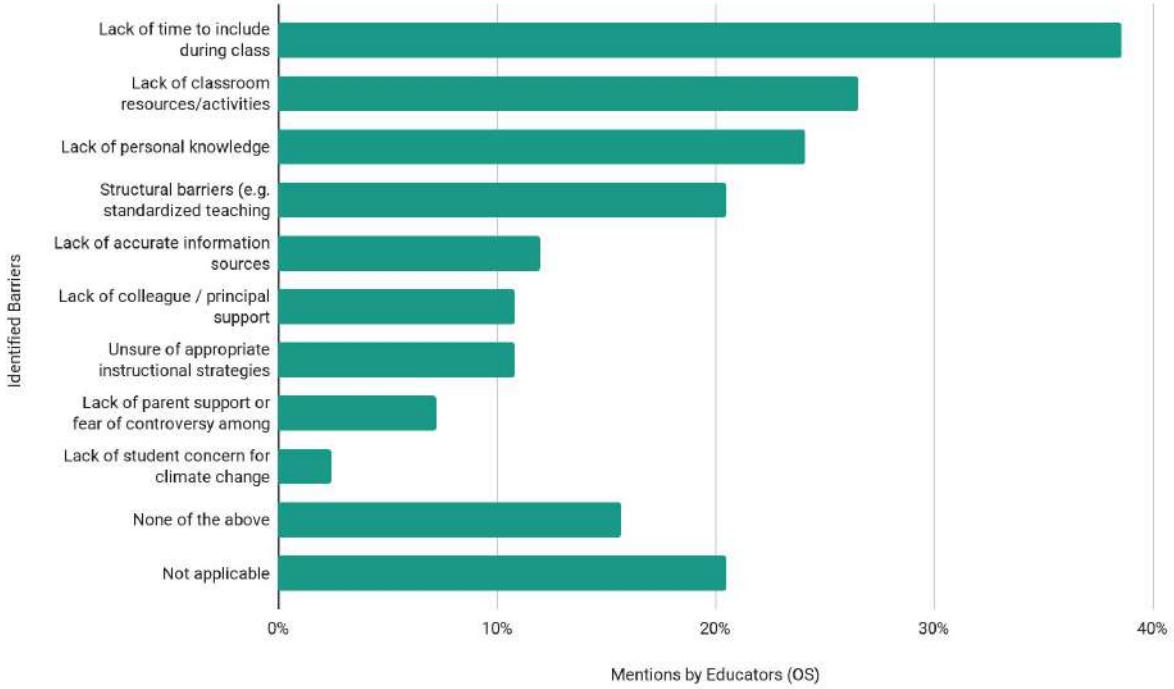
Manitoba open-sample educators feel more confident in their knowledge and skills (63%) than open-sample educators nationally (55%).

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)

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



n=78 (Educator OS = 78)

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 not identified as barriers by a small percentage of educators.

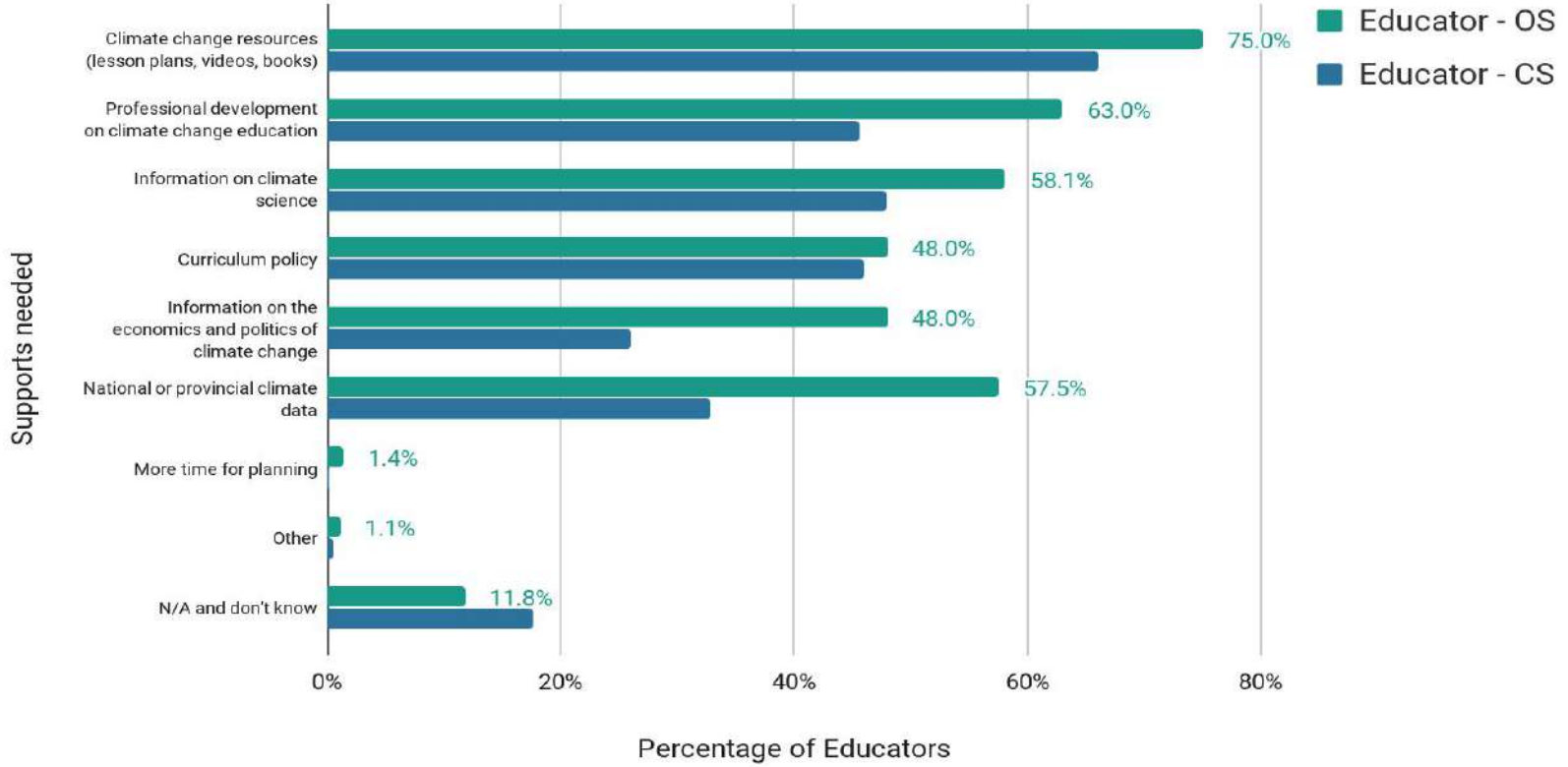
Manitoba

In Manitoba, the top four barriers mentioned by educators to include climate change education in the classroom were: lack of time, lack of classroom resources, lack of personal knowledge and then structural barriers. Following these barriers, educators selected ‘not applicable’ most often and none of the above.

Notable differences:

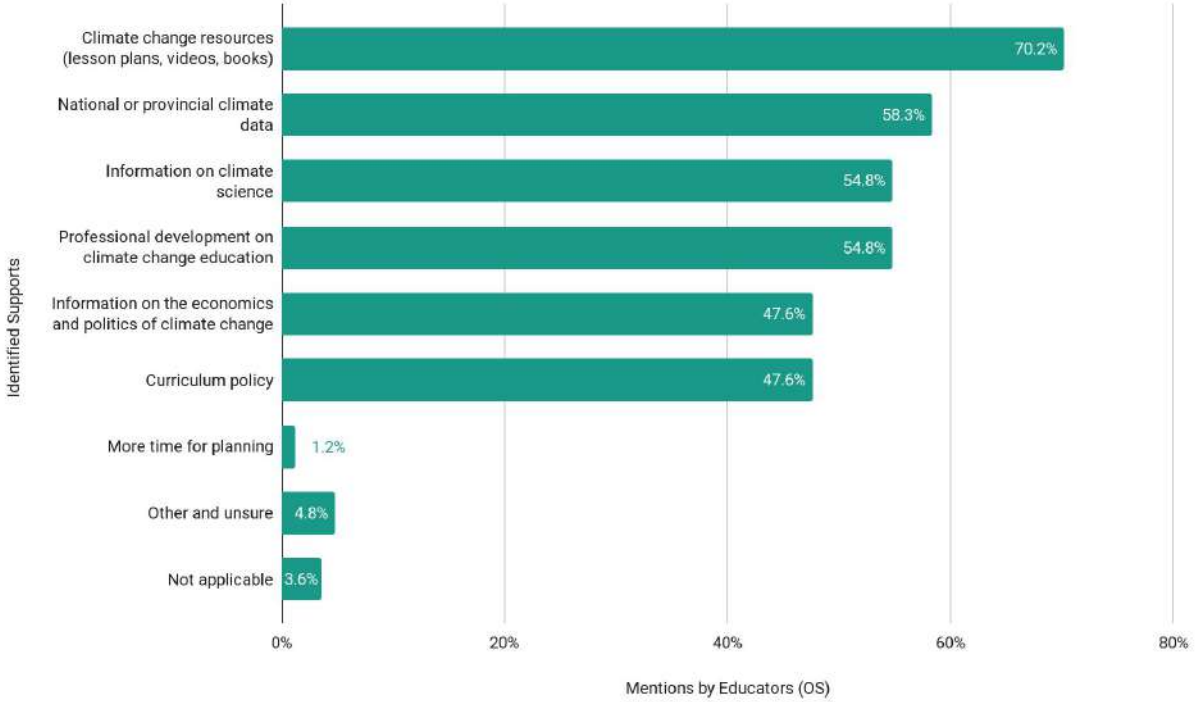
The barriers mentioned most often by educators in Manitoba were similar to the national results, specifically, the top four barriers are the same in Manitoba and nationally. Being unsure of instructional strategies and lack of parental support were not chosen as frequently by MB teachers. Nationally, lack of colleague/principal support falls farther down the list as well.

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



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

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



n=78 (Educator OS = 78)

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 (OS=75%, CS=66%), followed by professional development on climate change education (OS=63%, CS=46%), information on climate science (OS=58%, CS=48%), curriculum policy (OS=48%, CS=46%), information on the economics and politics of climate change (OS=48%, CS=26%), and national/provincial climate data (OS=58%, CS=33%). Least noted was time for planning (OS=1% CS=0%).

Manitoba

When asked what supports are necessary to teach climate change education, Manitoba open-sample educators chose climate change resources (including lesson plans, videos and books) most often (70%), followed by national or provincial climate data (58%), information on climate science (55%), professional development (55%), information on the economics and politics of climate change (48%) and curriculum policy (48%). Least selected was time for planning (1%).

Notable differences:

The number one support is consistent across national and provincial data: climate change resources. In Manitoba, educators chose national or provincial data as a desired support much more than the national results. Curriculum policy was less important to educators in Manitoba compared to the national results.

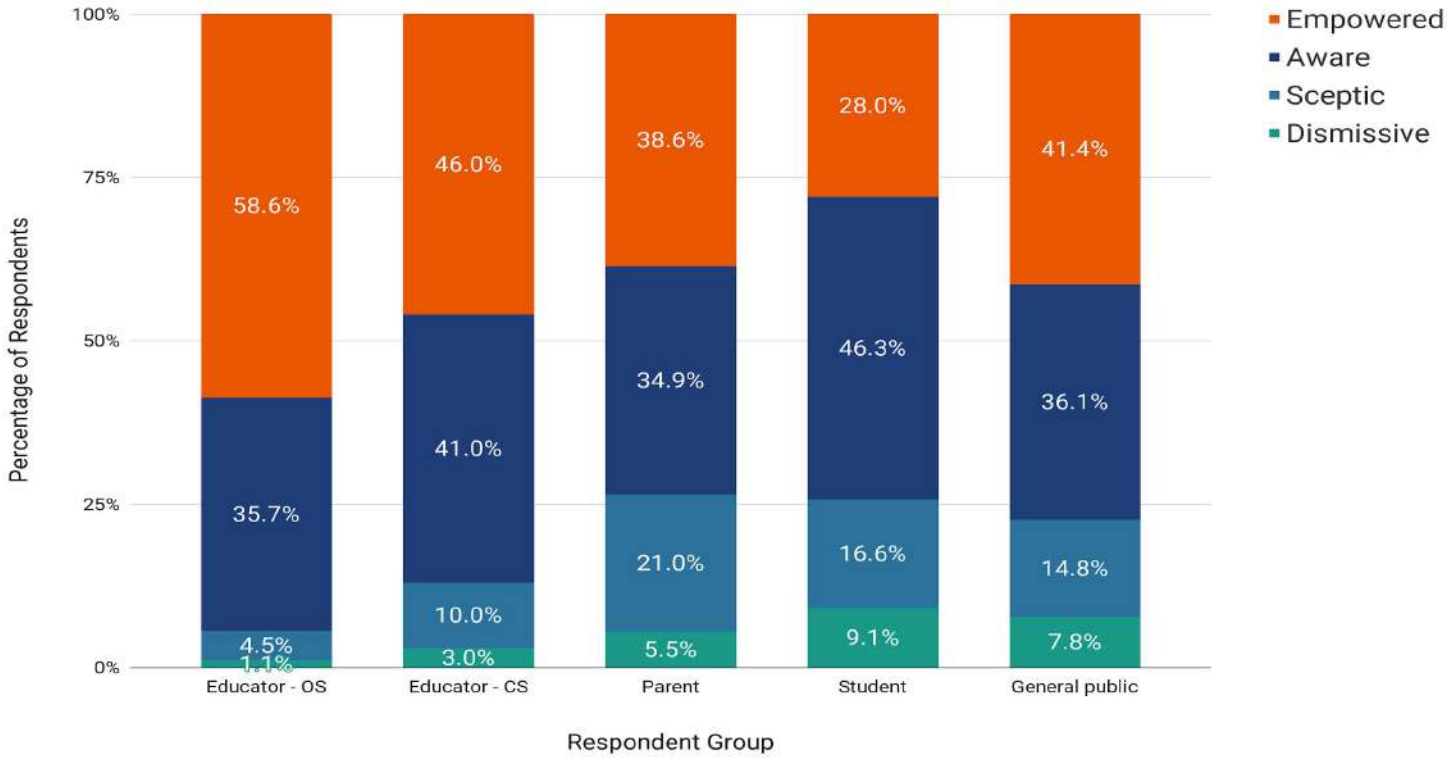
Ladder of Engagement: Overview

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

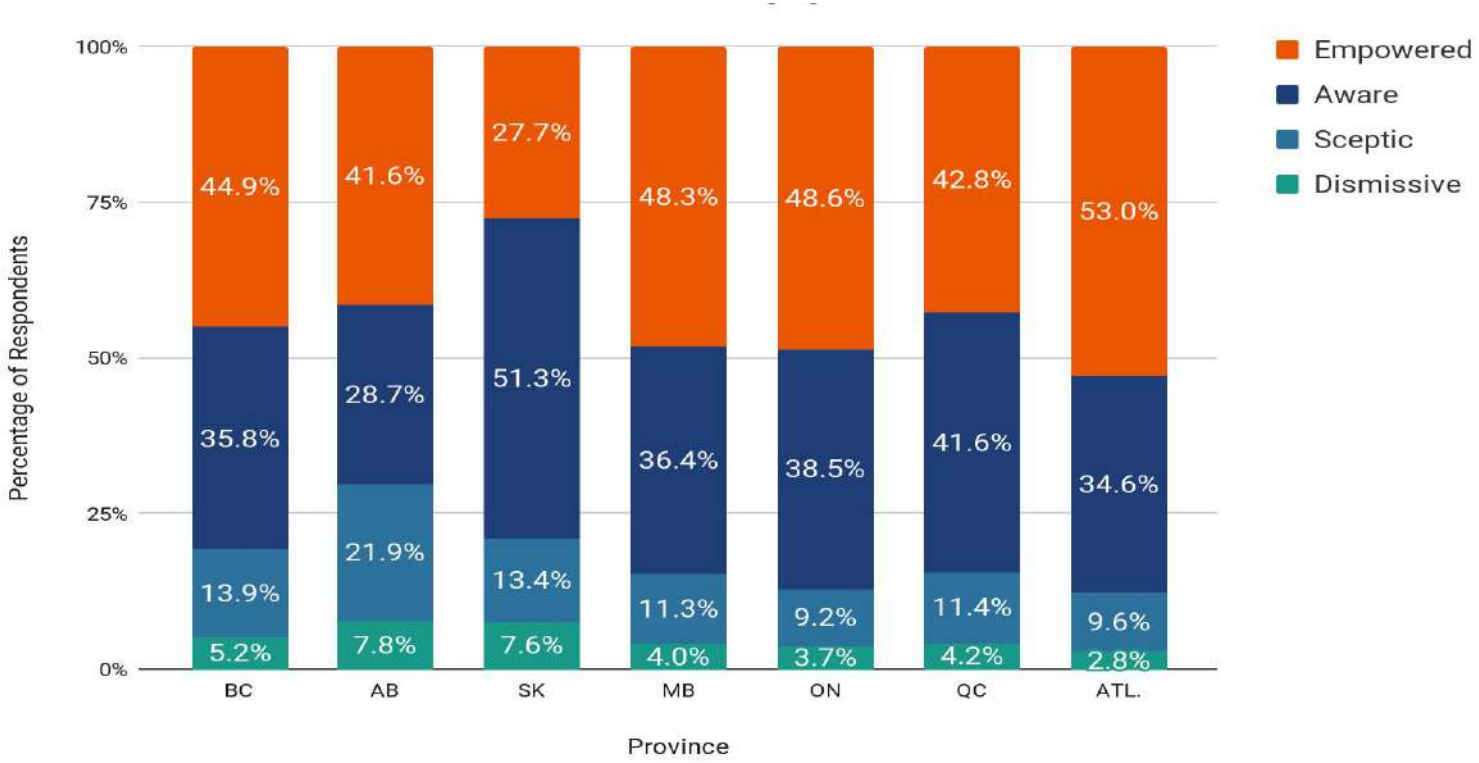
"In reality, the engagement process is non-linear, but for analytical purposes it helps to present groups of Canadians in a ranking from least to most likely to be "engaged" (Ecoanalytics, 2016).

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



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

Contact Information

Dr. Ellen Field

Lakehead University

efield@lakeheadu.ca

Pamela Schwartzberg

Learning for a Sustainable Future

pam@LSF-LST.ca