Sustainability issue communication and student social media engagement: Recommendations for climate communicators

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Abstract   This study explores the digital and social media information habits and preferences of students, particularly as they concern issues-based communication relating to climate change and sustainability. Researchers surveyed 203 undergraduate students studying a wide range of subject areas in a small Canadian liberal arts style university. Results were analysed using basic statistics to determine broad trends in social and digital media use among participants, their assessment of what kinds of content they found engaging online and their preferences relating to searching and sharing information on news and issues. Different environmental messages were also assessed by participants for whether they were engaging. Participants used a wide variety of platforms, in diverse locations, but demonstrated a tendency to use Google and YouTube most often to search for issues about which they cared. Respondents indicated a preference for image or video-based content, and also indicated that images and videos made a website more attractive. They generally reported not sharing news on social media, and tended to rate environmental messages with a problem-solution framework as most engaging. This study suggests that climate-change related issue marketing should favour YouTube and other video content, and should pay close attention to how environmental messages are presented in order to be most engaging to their target audiences.

INTRODUCTION

Throughout 2019, young people took the world by storm as they started striking from school to raise awareness about the disastrous impacts of climate change. Started by 15–year–old climate activist Greta Thunberg, the #FridaysForFuture school strikes became a global movement, in part because of the ability for different media forms, and particularly digital media, to help students organise around a cause they felt was important and urgent.[1,2] That #FridaysForFuture became a movement has inspired many issue marketers, particularly in the climate and sustainability domain, to ask whether social and digital marketing tools can be employed strategically for marketing related to climate change, and if so, how best to go about using digital and social media for these purposes.

The purpose of this study was to better understand the digital and social media related information habits and preferences of students, particularly as they concern issues–based communication related to climate change and sustainability. Using a survey distributed to students across a wide variety of programmes at a small liberal arts style university in Canada, researchers assessed the different ways students were engaging with issues–based marketing and environmental messaging, paying particular attention to what students indicated they found most engaging, in order to inform professional practice. The results suggest that the use of social and digital media for issues–based information–seeking takes place across a wide variety of contexts, and thus it is subject to different uses and gratifications. Adopting a media logic of entertaining content may assist issue marketers to craft more effective messaging; however, in addition to the need to be entertaining, marketing relating to climate change must also be personalised, offer solutions and tell a story.

This paper begins with a discussion of uses and gratifications theory, media logic and the specific best practices detailed in the literature about climate change communication. It then discusses the specific methods used to collect data for an exploratory study of students, and the results

of that study. Finally, it discusses overall findings and what issue marketers can learn from these results.

WHY PEOPLE USE MEDIA TO FIND INFORMATION: USES AND GRATIFICATIONS AND CLIMATE COMMUNICATION

Uses and gratifications theory outlines why individuals choose to use and engage with certain media, specifying that media use has a connection to specific psychological gratifications for the user.[3] Under this framework, different social media platforms would form part of an individual user's media ecosystem because each platform provides a different service to the user.[4] In the case of issues-based communication, blogs have been highlighted as one format that facilitates communication about social issues from a uses and gratification perspective.[5] Social media use, however, is driven by many complex and interrelated gratifications including relationship building and maintenance, social influence, and engaging with issues, information and news.[6,7]

With respect to climate change information-seeking behaviours, the platforms that people choose to use to learn about climate change — or conversely to avoid such information online — seems to depend in part on how the individual handles the affective experience of risk. If an individual is risk-avoidant, they will also avoid sources of climate change information in order to maintain a positive emotional state. If an individual is comfortable with risk; however, they may be more likely to seek out information about climate change using online platforms.[8] Of course, engaging with news or similar information can fulfil more than just a need to be informed. Engagement has been monetised in both social and regular media, meaning that information and news are often also expected to fill an entertainment gratification.[9]

HOW MEDIA SHAPE THE MESSAGE: THE MEDIA LOGIC OF CLIMATE CHANGE COMMUNICATION

Media logic, originally theorised by Altheide and Snow,[10] shows the ways that entertainment logics influence the ways that traditional or mainstream media like television or print news structure information in order to attract and retain the attention of users or viewers. Media logic can affect events or at least the way people interact with them, and people in return adopt media logics in the ways they interact with the media and one another.[11] In this sense, argues Altheide, news and politics are 'immersed in the entertainment format'.[12]

Both more traditional and newer forms of media produce and reproduce issues in the entertainment format; in turn, the audience comes to expect to be entertained, even when the subject matter is not, strictly speaking, intended for entertainment purposes. Online media channels tend to follow a similar media logic to more traditional media outlets like television or print, particularly when the topic is political in nature or related to climate change communication.[13] In reporting on climate change, media channels tend to up the emotionality of the issue in order to make it dramatic and worthy of attention.[14] Dramatic tension is also added to the issue when journalists set up a debate or dichotomy between climate change deniers and climate scientists — a tactic that does not always serve to further the science of the climate issue.[15]

HOW TO ENGAGE PEOPLE WITH DIFFICULT INFORMATION: THE RESEARCH ON CLIMATE COMMUNICATION

With respect to the specific issue of climate change, research has highlighted a number of best practices that communicators should follow in order to maximise the impact of messaging related to climate change.

For example, many studies have illustrated that it is important for climate change or sustainability communicators to use many different forms of media in order to ensure the message reaches as broad an audience as possible.[16–18] The nature of the content also matters greatly. Research stresses the importance of using both visuals as well as accessible language to reach people with messaging related to climate change.[19–21]

Going beyond compelling visuals and accessible language, messages can be more effective if they are personalised to the specific audiences they are intending to reach. In other words, a one-sized fits all approach will not inspire engagement with a message related to marketing climate change science.[22–25] Other literature stresses the importance of values-based appeals — that is to say, marketing related to climate change should both personalise the communication but also do so on the basis of the expressed values of the desired audience community — be they economic, community, family, morality, environmental or other.[26–28] Emotionality can help, but fear-based appeals are often ineffective. Instead, the literature tends to focus on using emotion strategically. This means paring negative emotional appeals with calls to action, or focusing on empowering or uplifting messages.[29]

The way messages related to climate change are delivered will effect whether they inspire people to take action on the issue, or conversely, whether they will feel demotivated and disempowered to do anything. On this issue, the literature stresses the importance of empowering the audience of the climate change related marketing messages with solutions that help them see what they can do about the issue, in order that they do not fall into a cycle of feeling helpless.[30–32] Timeliness is also important. In light of a major media or other event related to climate change, messages related to climate change tend to be more effective.[33,34]

Storytelling, or the use of narrative, is an important component of effective climate communication. Climate communicators need to tell an engaging story that helps to make the issue real to the audience.[35,36] In addition, the specific channels used to communicate to audiences about climate change and similar issues matters. That is to say, it is important to tell a good story and also to personalise communication in order to make it relevant. Message personalisation can occur both by reaching people on the platforms that they are most likely to use, and also by enlisting the help of individuals that are held to be influential by the target audience.[37–39] Overall, the literature suggests that climate communicators using personalisation, storytelling, emotionality, values and empowerment in their messaging will be more effective than those who do not. But these are general guidelines, and the present study looked to determine how these guidelines may or may not apply to what students interact with and find engaging online in order to help create guidelines targeted at this specific group and to see if the recommendations hold up.

METHODS

Starting with the assumption that uses and gratifications can help to understand how people engage with issues on digital media, this project asked the following research question:

RQ: How does reported use of the internet and social media by students to engage with issues-based communication fit the current research on best practices for climate change communication, and what can climate communicators learn from this?

To answer this research question, a survey was administered to undergraduate students studying a wide variety of different subjects at Royal Roads University in Victoria, British Columbia, Canada. Researchers used LimeSurvey to administer the survey, but

printed copies were also available for students who could not access the instrument electronically. To ensure the largest possible participation rate, the survey was administered directly to students during class time with permission from their instructors. Students were not required to complete the survey within the allocated time, and could instead use the time to work quietly if desired. Approximately 300 students were invited to take the survey and 203 students in total completed the survey. Descriptive statistics were used to get an idea of how students were using social media and digital communication tools to engage with issues that mattered to them.

RESULTS
Demographic data
Although the sample described in this paper was drawn from undergraduate students, the particular student pool who completed the survey had the following demographic traits. With respect to age, 59.1 per cent of the population were 18–24 years old, 30 per cent were 25–34 years old, 7.4 per cent were

35–44 years old, 2 per cent were 45–54 years old, 0.5 per cent were 55–64 years old and 1 per cent of respondents were over the age of 65. With respect to gender, 53.7 per cent of respondents identified as women, 42.9 of respondents identified as men and 3.4 per cent of respondents identified as other or non-binary. With respect to nationality, 47 per cent of respondents reported being from Canada, and 53 per cent of respondents reported being from outside of Canada.

How people access online information
Participants were asked on which devices they prefer to access information (Figure 1). Fifty-seven per cent of respondents reported a preference for accessing information on their smartphone. Thirty-three per cent indicated they preferred using their laptop, and 7 per cent chose their desktop computer as a preferred device. Two per cent indicated that they favoured accessing information on their iPad or tablet, and 1 per cent indicated that they preferred to access information on another mobile device.

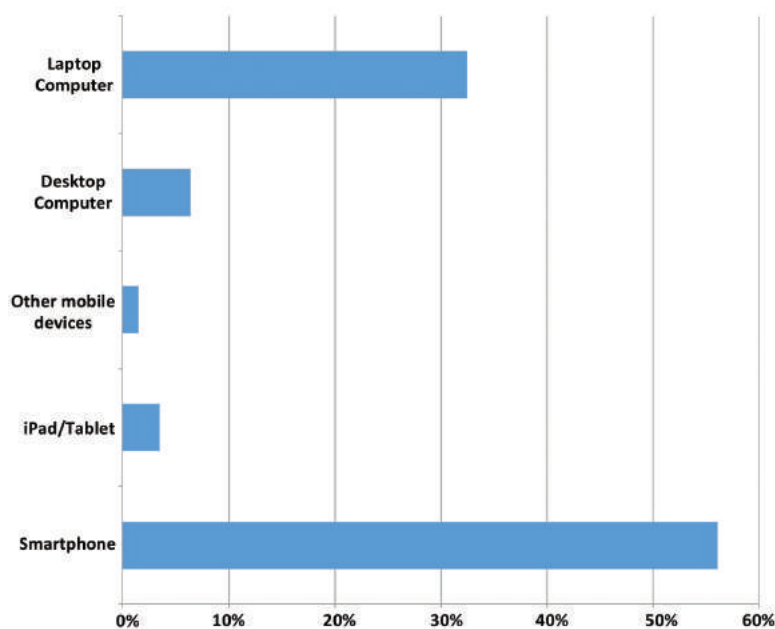Respondents indicated where they were physically located when they accessed online

Figure 1: On which devices do you prefer to access online information

information. Given that students were chosen for this study, it was not surprising that respondents reported accessing online information from home and school most of the time, followed by no place in particular, which meant they could access online information from anywhere at any time (Figure 2).

Respondents indicated how often they used different popular social media sites. More than half of the respondents reported using Facebook, Instagram and YouTube daily. Other social media sites were used daily by a much smaller portion of the participants. More than half the participants reported never having used Tumblr or Reddit, even though these sites are reported to be growing in popularity among young people (Figure 3).

Seeking and sharing: Trends in online issues-based information engagement

Participants were asked to rate the online and offline spaces they turned to for information on issues that concerned them (Figure 4). Participants indicated primarily using Google to find information on issues of concern.

The second most popular site was YouTube, followed by online newspapers and online academic journal articles. Facebook and Twitter were much lower on the list, as were print sources, blogs and other search engines.

When asked about how often they shared news content on social media, respondents indicated they did not share often. Nineteen per cent indicated never sharing news content, and 53 per cent indicated they shared news content once per month or less. Only 28 per cent of the participants suggested they shared news on social media at least once a week or more (Figure 5). This suggests that young people (who made up the majority of the participants) might be less likely to share news about issues on social media. They may be sharing it in other ways (for example e-mail or instant messaging or they are possibly not sharing at all). This finding aligns with the data on preferred sites. Google and YouTube were indicated as the sites that participants used to find information that concerned them (Figure 4). These sites are not optimised for sharing news the way Facebook and Twitter are, for example, and are more useful for consuming information.
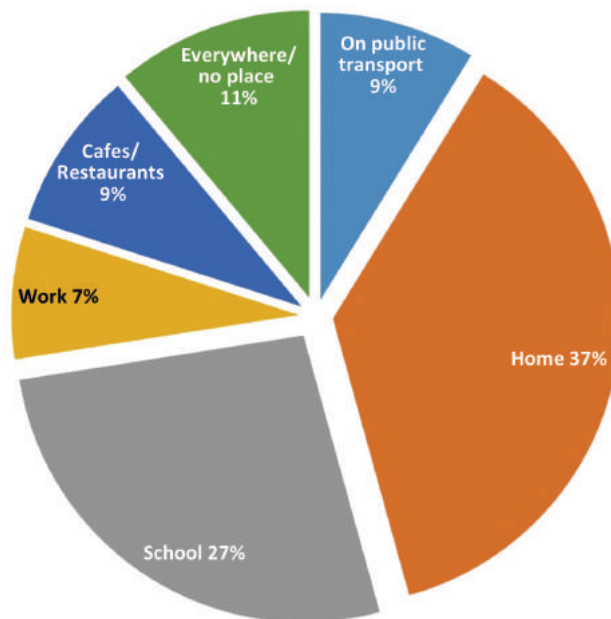

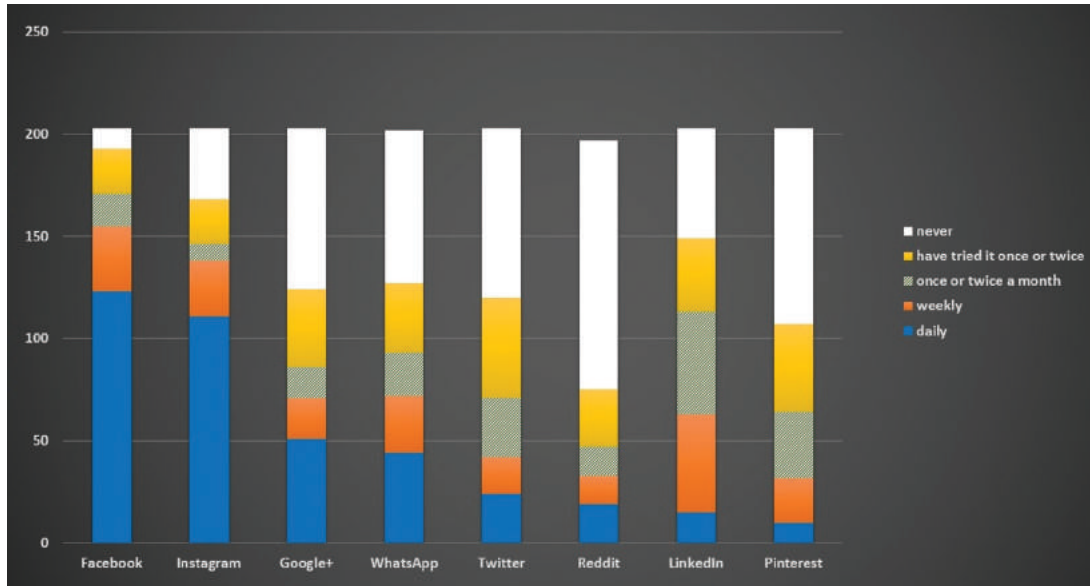**Figure 2:** Where are you typically located when you access information online?

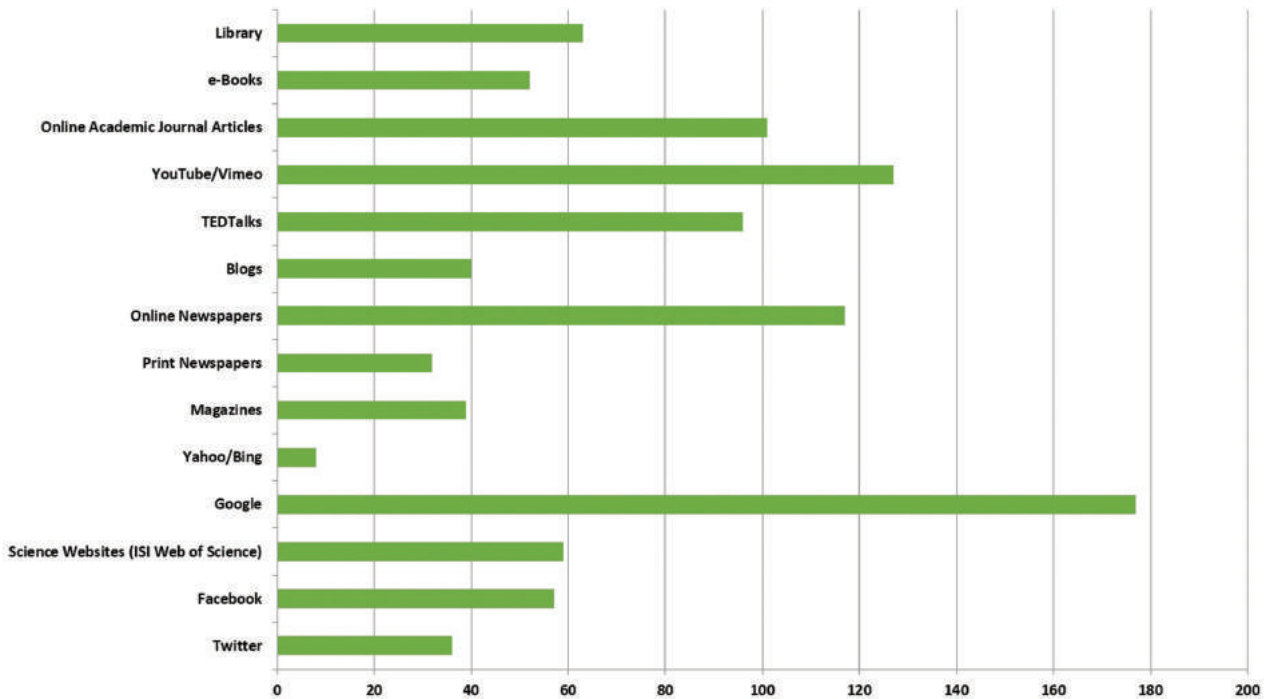**Figure 3:** How often do you access the following social media sites?

Figure 4: Where do you go to find out information on issues that concern you?
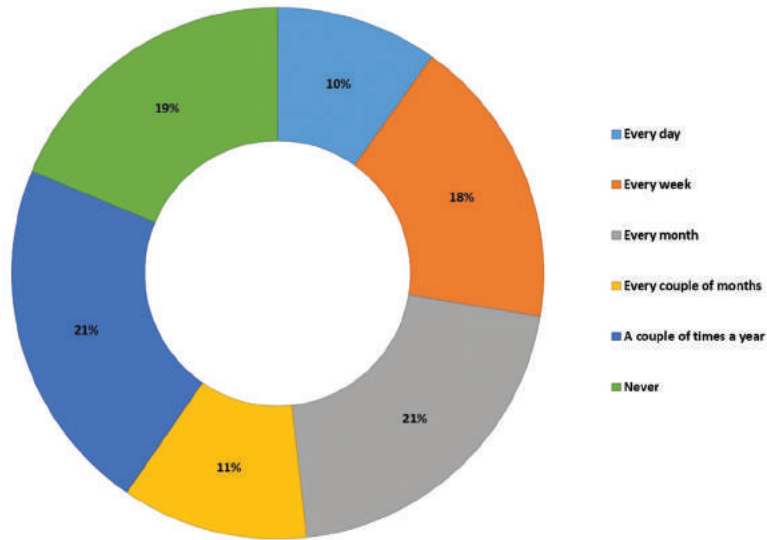
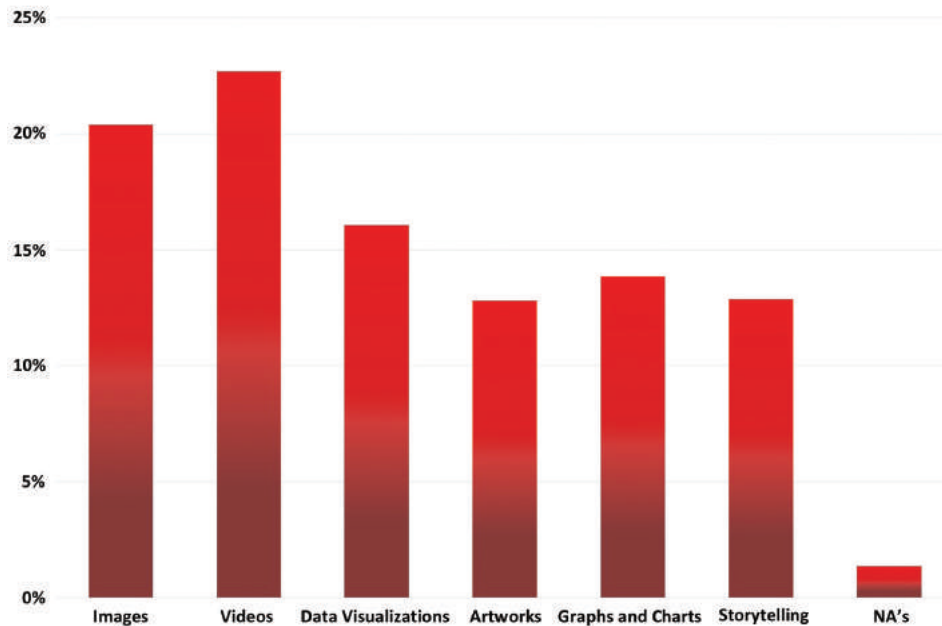**Figure 5:** How often do you share news on social media?

Figure 6: What types of content do you find most engaging online?

Participants indicated which type of media forms they found most engaging in an online context. Twenty-three per cent of respondents found online videos most engaging, followed by images and data visualisations at 20 per cent and 16 per cent, respectively. Thirteen per cent reported finding art most engaging, 14 per cent reported finding graphs and charts most engaging, 13 per cent reported finding storytelling most engaging and 1 per cent of people indicated N/A to the question (Figure 6). Here, one can see that type of content mattered with respect to

engagement (video or images), but when asked, participants rated storytelling relatively low — which seems to contradict the literature about engagement.

Engaging content was further probed by asking participants what features they found most attractive on a website, as well as what style of messaging they found most engaging. Figure 7 shows the features they indicated as being most attractive. Again, like reports of engagement, the type of content seemed to be most important here. Images were preferred, but layout, videos and content were also indicated as being important. An embedded social media feed and blogs rated as the least attractive features to have on a website.

Figure 8 shows the messages that participants found most engaging. This involved specifically testing messages related to climate change and sustainability. The question was designed to include different styles of messaging as suggested by the literature relating to best practices for climate communication, as described above. Participants had five messages to choose from:

1. Palm oil deforestation is slowly killing the Sumatran tiger (emotional appeals, sense of crisis, timeliness).
2. There is still time to win the battle against climate change, but we need to act now to reduce global emissions (urgency, call to action, timeliness).
3. Solving climate change starts with the belief that we can (uplifting, positive, empowering).
4. Biodiversity, like climate change, does not stop at political borders. It, therefore, requires a broader systems approach (empowering, problem-solution framework).
5. My house was destroyed by Hurricane Sandy in Far Rockaway. I did not want to be known as the girl who did not have a home (personalisation, storytelling, values).

The message rated by the most participants as being most engaging was message 4 above, which fits into a problem-solution framework. Twenty-eight per cent of study participants rated this message as most engaging. Conversely, message 3, which was the uplifting and empowering or positive
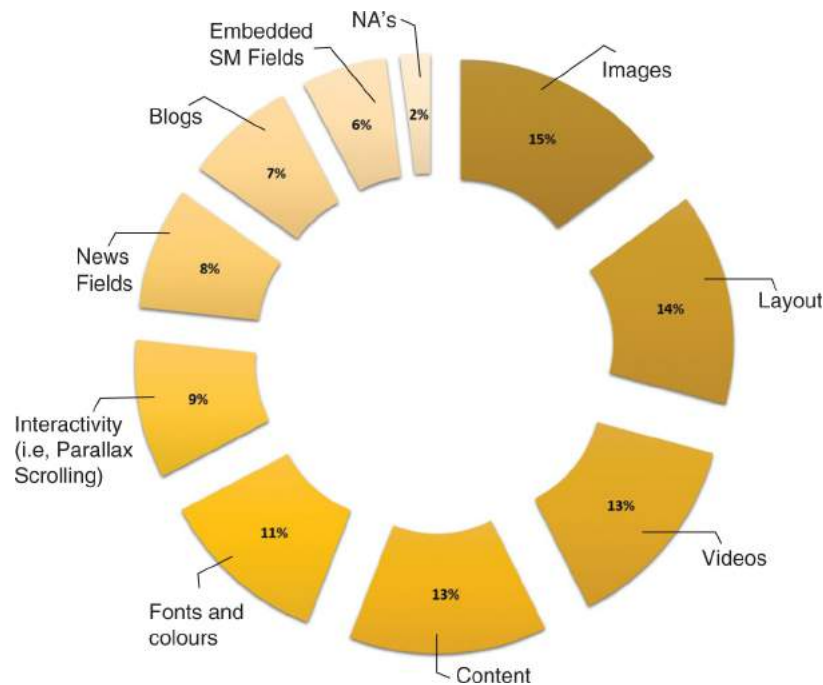

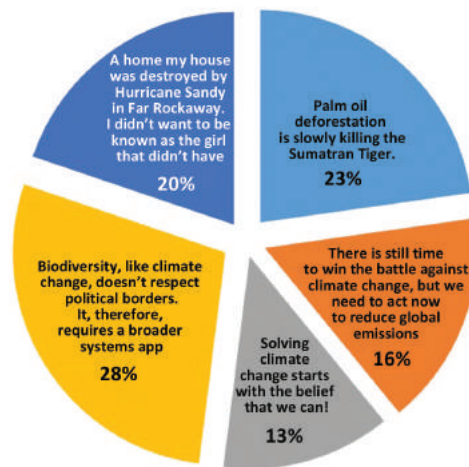**Figure 7:** What features do you find most attractive on a website?

Figure 8: Which message do you find most engaging?

message, was rated as the most engaging by the fewest participants — only 13 per cent of the participants indicated that they found this message to be the most engaging.

DISCUSSION
Trends in accessing information

The majority of the students surveyed were below the age of 35, which puts them solidly into the demographic categories thought to be most likely to use digital technologies to organise around an issue like sustainability or climate change. Respondents indicated being heavy smartphone users, and accessing the internet from a variety of locations, including home, school, and many places in between. When looking for information on issues they cared about, they would often turn to YouTube or a Google search to find what they were looking for. Their personal social media habits included regularly accessing Facebook, Instagram and YouTube. These trends are aligned with research conducted by the social media lab[40] showing that young people tend to be high YouTube and Instagram users, and showing that Facebook is still the dominant social network in Canada. Interestingly, however, although a large number of survey

participants reported accessing Facebook for personal use, the majority did not indicate regularly sharing news on social media. This finding can also be understood in light of broader trends in social media engagement for young people. Recent research has shown that young people tend to share different content on different networks depending on how they want to present themselves,[41] with many young people indicating that they do not want to post too much information about their interests on Facebook. News is not really Instagram-worthy, as it is not visual content, so if young people were posting about news or issues they cared about, it would likely be to what they felt was a more private group, such as WhatsApp. This type of message or content curation across different social sites speaks to the uses and gratifications that each different digital communication medium provides for young people.[42]

The findings related to how respondents accessed information suggest that the advice to personalise communication by platform should take into account not only which platforms young people are using but also how they are using them. In other words, it is not enough to tailor content to look good on Facebook. Issues-based

communication must also be tailored to reflect how young people engage with these issues. Young people may no longer be interested in sharing news on Facebook, but if they come across content on Facebook, Google or YouTube that is easy to share on a more private instant messaging site, such as WhatsApp, the message may travel further. Also importantly, these findings suggest that content needs to be seamless on mobile devices and should be kept short to enable viewing anywhere at any time. Survey respondents reported often using their mobile devices in a variety of places, suggesting they would be unlikely to have the patience to scroll through lengthy text on a website or blog post. Here, the uses and gratifications of the physical technology, as well as the uses and gratifications of each platform, need to be considered in the construction of messaging related to climate change.

Trends in online engagement

The data suggests that issues communication is more compelling when it includes visual and video elements. YouTube was the second most popular site that participants used to search for information on issues that mattered to them, suggesting that video is an increasingly important way to provide information about issues like climate change. Additionally, participants felt that websites were more engaging if they contained a variety of visual elements. Layout was indicated as important feature on a website, suggesting that aesthetics play a role in the successful engagement of young people with online information. These findings confirm research by Hodson and Traynor,[43] Hodson, Dale and Clifton–Ross[44] and Williams.[45] These authors suggest that for issues-based communication, simply providing the public with information about an issue is not enough to foster online engagement with that issue. Instead, communicators need to be aware that people are interested in the visual and aesthetic qualities of online information.

To put it another way, in an online context, a picture or video truly is worth a thousand words.[46] This trend towards video is likely a combination of the uses and gratifications of mobile devices, which make video viewing quite seamless, as well as potentially a media logic that favours the entertainment frame. Most people prefer to consume video rather than text because it is a more dynamic and interesting medium; thus, if given the choice, they will choose to search for information in a platform that offers more engaging content — like YouTube. Interestingly storytelling and personalisation did not rate as most engaging when participants were asked. Instead, particular types of media were preferred. That is to say, storytelling may be moderately engaging, but it is more effective in image or video-based forms, than it is on a blog or text based form, for example.

Returning to the important question at hand, that is to say, sustainability and climate-related communication, when participants were asked about specific examples of which environmentally related messages they found most engaging, they indicated that the message about biodiversity needing a broader systems approach as the most engaging statement. This way of phrasing the issue can be understood as a concrete way of addressing the issue. It provides an overview of the problem and offers a potential assessment of a solution. In that sense, this particular framing of the issue represents an empowering problem–solution framework. This finding supports existing literature suggesting that messaging related to climate change is more effective when it provides solutions as well as presenting the problem.[47–49] Importantly, the data also shows that simply providing a positive message (solving climate change starts with the belief that we can) is rated as much less engaging. Although positive, this message does not provide concrete solutions, so it is perhaps less engaging because it is empowering and yet more empty than the more complex message about taking a

systems approach. Similarly, a personalised message or storytelling style message was not rated as the most engaging. This suggests that with respect to problems like climate change or sustainability, one must not simply tell stories or make the message relevant, but also provide concrete solutions so that people feel they can attend to the issue.

RECOMMENDATIONS FOR CLIMATE CHANGE MARKETERS

Overall, the results of this exploratory study suggest that the way participants were consuming content had to do, at least in part, with the uses and gratifications of the devices and platforms that respondents were using regularly. Importantly, since people are using mobile devices to access issue-based content, and could be accessing it from home, school, or anywhere in between, it is important to create content that captures their attention. This means focusing on the content types they find most engaging, namely images and video, and also ensuring that any website content is well and clearly laid out, with an abundance of images, infographics and video content.

Students are using social media sites like Facebook but are not always sharing content on these sites. Issue marketers working in the climate change space should not be discouraged if young people seem to be hesitant to share messages on social media platforms, as the data indicates that people may not be sharing news as much as they used to. This may make it difficult to assess the effectiveness of issues-based campaigns that are social media focused. Marketers should thus ensure they are using a wide range of content types to engage with their audience, and should consider using a combination of social media metrics, plus conventional focus group testing and surveys to measure impact.

Video is an important tool for not only creating content that young people find engaging, but also for reaching young people in the first place, as many are using YouTube as an alternative to Google to seek out information on issues of concern. This could be helpful, as YouTube allows content producers to assess the number of video views, thus helping to determine the success of a campaign.

Finally, in addition to being mindful of the type of content being produced and the platforms on which the content is shared, marketing related to climate change must consider the kinds of messages that are most likely to be engaging to the audience. Consistent with the literature on the topic, a variety of strategies, including personalising the message, using a high level of emotion, and especially, employing a problem–solution framework, will help to create messages that will resonate. In contrast, empty but positive platitudes, such as 'believe we can', are not considered to be engaging, and a statement that tells people to do something about climate change, but without proposing any solutions, is also less engaging.

LIMITATIONS AND FUTURE WORK

This exploratory study helps to illuminate how people are using online media to access information about issues they care about, and also had students report on what kinds of content and platforms they used, how and where they used them, and what they found most engaging. These are all important criteria for issues-based communicators to understand, and this study opens the door to exploring these issues in more depth. As a small-scale study with 203 participants, it is of course limited in its generalisability. For that reason, the researchers anticipate that future work could and should examine this issue with a larger population of young people, drawing not only from university students, but also young people from technical colleges, trade schools, and ideally young people who have not chosen higher education.

Future work would also ensure that participants do not only come from one geographical area, but represent a wide variety of backgrounds and locations. This would help to determine if these trends continue across different groups of young people, or are for some reason specific to the population examined in this study. In addition to breadth, future work would also benefit from adding depth to the inquiry. For example, this study showed that students find videos and images most engaging compared with other content types, but did not reveal what it is about video and images that makes them engaging. In-depth interviews could potentially reveal the motivations behind the ways different types of content were rated. Furthermore, in-depth interviews or focus groups could reveal why participants rated certain messages as being more engaging than others. This approach could in turn help professional communicators construct even more effective messages in the future.

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