

Responses to reviewer 3 (Denise Balmer)

Thank you very much for taking the time to review the article. Please find below the point-by-point responses to your comments:

Line 25-32 contains a very long sentence which really needs a break

Indeed. We have broken the long sentence into two smaller ones.

“During this time, the scientific community has published several articles highlighting the urgency of the current situation (National Academy of Science, 2020), while pointing out that the progressive increase of greenhouse gases may trigger a domino effect in the global climate system that would make it unstable. The consequence would be a raising of the Earth’s average temperature beyond the limits established by the Paris Agreement, which aims to prevent the increase in the average global temperature of the planet from exceeding 2°C compared with pre-industrial levels”

Line 38 phrase is repeated

The repeated phrase has been deleted.

Line 47 double full stops

Corrected. Thank you

Line 175 an extra ‘i’ needs removing.

See response below

Line 176 no need for ‘is’

See response below

Line 181 part of the sentence appears to be missing

See response below

Line 181 analyse (d)

There were several grammatical issues in the paragraph in the Methodology section the reviewer is referring to in the last four comments. We have now rewritten it as follows:

“In order to assess the scarce scientific information available to the public on climate change as well as the importance of mass media, we will use the data gathered in a survey on climate change knowledge carried out in Galicia, a region located in the northwest of the Iberian Peninsula. The average annual temperature there increased by 0.20 degrees per decade between 1961 and 2015. Between 1951 and 2017 there were nine episodes of drought. The absence of rain has a very important impact on this Spanish region because its economy and way of life depend on rainfall, which is usually very reliable. It is also the region of the entire Iberian Peninsula with the most kilometers of coastline and this makes it especially vulnerable to rising sea levels (Xunta de Galicia, 2015).

The quantitative study was conducted during the 2018-2019 academic year in the three universities based in Galicia: University of Vigo (UVigo), University of Santiago de Compostela

(USC) and University of A Coruña (UDC). The participants in the survey were 600 students from different years and from both science and humanities fields: Journalism, Sociology, Biology, Political Science, Mathematics, Industrial Engineering, Aeronautical Engineering, Economics and Law. For the statistical analysis, we used the Wilcoxon test and the Kruskal-Wallis test, to identify the factors that have a significant influence on their knowledge on climate change.”

Line 230 ‘an’ experience

Corrected

Line 236 it allows (opportunities?)

The suggested change has been made.

Line 276 I ?

The typo has been corrected

Line 470....so that the public can piece together each part of the complex puzzle that forms the Earth’s climate....

The suggested change has been made. Thank you!

Responses to reviewer 1 (Louise Arnal)

Dear authors,

Many thanks for thoroughly responding to my previous comments. Below are additional comments which I hope will help inform your second round of revisions.

Thank you very much again for taking the time to review the article and for your positive comments. Please, find below the responses to each of your remarks :

Please provide a statement regarding ethics in your manuscript. What ethical clearance did your survey receive? How did the participants give their informed consent to take part in the survey?

Ethics approval was not sought for this research. Ethics approval in Spanish institutions is only necessary when carrying out medical research or research with animals or human samples. As for the kind of survey used in this project, neither the Spanish Research Agency (AEI), nor the University where this project was based (University of Santiago de Compostela) require ethics approval. According to Spanish science standards, the use of this survey is completely valid. In order to meet general ethics standards in sociological research, we have been thoroughly careful in preserving anonymity when using the results of this survey. In addition, the survey avoided collecting any sensitive information that was not directly connected to the objectives of this research and focused on general visions about climate change information. Information has been kept in an encrypted database, only accessible to the researcher.

L102: Please give examples of audiovisual pieces you are referring to in the text.

Following the reviewer's suggestion we have now added some movie titles that have been the focus of research analyzing climate literacy

"It is true that there exist other informal scopes that have been investigated such as, for example, the impact that films and documentaries about global warming have on society. In this sense, some conclusions are that the audience's awareness increases after watching one of those audiovisual pieces, such as *The Day after Tomorrow* (2005), *An Inconvenient Truth* (2006) or *The Age of Stupid* (2009); however, the effect vanishes soon" (Sakellari, 2014).

L113-115: This sentence is still unclear, please rewrite. The formulation you used in your answer to my comments helped me understand what you meant and could be used in the paper with minor edits: "The reader learns about meteorology and can put the learning into practice and compare the information with reality."

As per the reviewer's suggestion, we have now included the sentence from the previous responses and changed the paragraph as follows:

"Building on this idea, we argue that the scientific communication format presented in this article is actually inspired in an 'educational experience' created after a constant process of knowledge acquisition in which the reader learns about meteorology and can put the learning into practice and compare the information with reality, such as for example by checking against the weather forecast. In this sense, the characteristics of the dissemination format described and analyzed in this article can be considered rather unique and different from any

other example taken from Spanish or international media. It would be a model designed to educate, rather than to raise awareness”.

L106-108, L144-146 & L155-158: The survey methodology should be introduced before these survey results are mentioned.

We fully agree with the reviewer in that the survey results should not be mentioned before the survey is actually introduced. We have now deleted those mentions to the survey results in the introductory sections.

The methodology needs to be re-written. E.g. L181-182 are now out of place and don't follow the previous sentence.

There was a mismatch between sentences in that paragraph. We have now rewritten the paragraph to correct the problem:

“In order to assess the scarce scientific information available to the public on climate change as well as the importance of mass media, we will use the data gathered in a survey on climate change knowledge carried out in Galicia, a region located in the northwest of the Iberian Peninsula. The average annual temperature there increased by 0.20 degrees per decade between 1961 and 2015. Between 1951 and 2017 there were nine episodes of drought. The absence of rain has a very important impact on this Spanish region because its economy and way of life depend on rainfall, which is usually very reliable. It is also the region of the entire Iberian Peninsula with the most kilometers of coastline and this makes it especially vulnerable to rising sea levels (Xunta de Galicia, 2015).

The quantitative study was conducted during the 2018-2019 academic year in the three universities based in Galicia: University of Vigo (UVigo), University of Santiago de Compostela (USC) and University of A Coruña (UDC). The participants in the survey were 600 students from different years and from both science and humanities fields: Journalism, Sociology, Biology, Political Science, Mathematics, Industrial Engineering, Aeronautical Engineering, Economics and Law. For the statistical analysis, we used the Wilcoxon test and the Kruskal-Wallis test, to identify the factors that have a significant influence on their knowledge on climate change.”

L275: 2017 and 2010 need to be swapped around.

The suggested change has been made.