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Beliefs about Global Climate Change Among Faculty at the University of Northern Colorado

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Motivation:

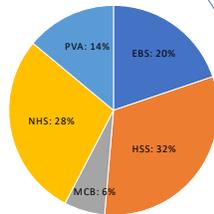
A special report by the *Intergovernmental Panel on Climate Change* warned of grave impacts to global ecosystems and human society if immediate efforts are not made to limit greenhouse gas emissions so that global warming does not surpass 1.5 deg C above the Pre-Industrial temperature. Limiting warming is possible but requires sweeping changes to a societal infrastructure that is dependent on fossil fuels. Whether or not these changes are made, UNC students face a future that will be impacted by this warming, no matter their chosen discipline of study (IPCC, 2018).

Abstract:

A survey was administered to UNC faculty and instructors in Fall 2019 with the aim of assessing faculty beliefs about global climate change and the role that UNC plays in preparing students for the impacts of global climate change in coming years. A majority of survey respondents (n=226) are concerned that climate change will affect the lives of UNC students in the future and that UNC should be doing more to address global climate change and prepare students. We share survey results and faculty suggestions and comments regarding incorporating global climate issues across a broad disciplinary spectrum.

Who participated in the survey?

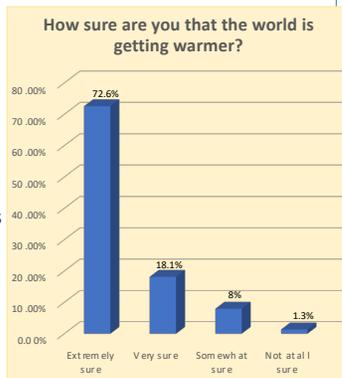
This survey was sent to 609 teaching faculty at UNC (including adjuncts listed on department websites). The response rate was 37% overall. The majority of the survey respondents were from the colleges of NHS and HSS. About 14% work primarily with graduate students, while the remainder work with primarily undergraduates or a mix of both.



Is the world warming and what's causing it?

About 94% of survey respondents indicated that they believe the world is getting warmer. A majority of respondents felt quite certain about their beliefs.

Most (87.6%) of the faculty respondents believe that global climate change in the past 150 years is caused by human activity. About 5.2% believe that the change is natural, and the remainder of the respondents indicated that they think it is a combination of both human activity and natural processes.



Perceptions of Climate Change

➤ **Understanding and concern**

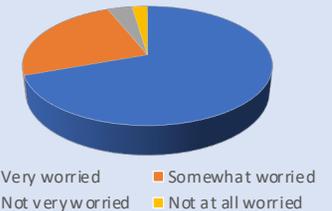
A majority of respondents indicated that they have a rudimentary (~40%) if not firm (42.3%) understanding of climate science. 69.5% indicated that they are 'very worried' about climate change, while 24.3% indicated that they are 'somewhat worried'.

About 48% of respondents indicated that they felt that the rudimentary or firm understanding they have of the climate science is sufficient for their teaching. 46.5% indicated that knowing more about climate science would benefit their teaching.

➤ **Belief in Climate Change Impacts**

Most respondents *strongly agree* (87.6%) or *somewhat agree* (10.5%) that climate change is already impacting the United States and 69.3% believe that climate change is already harming people in Colorado. Most (~87%) also believe that climate change will impact the lives of UNC students a great deal.

How worried are you about global climate change?



Who should take action? And what are faculty willing to do at UNC?

➤ **What should we do about climate change at UNC?**

92% of respondents felt that UNC should be doing 'more' or 'much more' to prepare students for climate change. They felt UNC should do more to increase student awareness of the scientific causes, physical and social impacts, and potential solutions and that students need training to address climate change in their personal and professional lives. While some faculty felt that there should be pressure on UNC administration to respond to climate change, many also felt that students need more education related to climate change. As climate change is a highly interdisciplinary topic, there is potential to create cross- or trans-disciplinary curriculum to reach more students.

Some faculty, however, provided comments that suggest they would be uncomfortable working climate change into their courses. Some felt that climate change was not appropriate to teach with their discipline, a few did not agree with the fact that human activity is contributing to climate change, and/or that the impacts will be catastrophic.

➤ **What support do you need to bring climate change into your courses?**

Respondents indicated that the following would aid in integrating climate change into their curriculum:

- Disciplinary-related teaching resources that integrate climate change (36%)
- Professional development related to climate change education (28%)
- Support from the College (12%)
- Support from their school or department (10%)

Summary

While there is strong interest in promoting transdisciplinary curriculum that increases awareness of climate change, many faculty who don't already teach it feel that it's difficult to weave into their courses (not directly relevant to their topic or not enough time). Some faculty are concerned that about retribution from weaving in a controversial topic.

But most faculty are clearly aware that climate change will impact everyone in the near future and they support more action at UNC to ensure that UNC graduates are equipped to deal with change (or, are at least aware of it) in their personal and professional lives. Many faculty (~40%) are interested in further professional development or discipline-related resources that would support the integration of climate change themes in their disciplines. Others (26%) would be interested in professional development if there were some form of compensation for additional work.

This survey, overall, underscores that need for curriculum and/or professional development that will better prepare UNC graduates for life with climate change.

The survey utilized in this study was approved by the UNC Internal Review Board.

Reference:
IPCC, 2018: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)].