

THE EFFECTS OF GUIDING CLIMATE CHANGE EDUCATION THROUGH A SOCIAL JUSTICE LENSE

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Rationale

- Effective climate change education is necessary for empowering youth to take action towards climate solutions.
- Emphasizing how people with less social power are being disproportionately affected by climate change is a way to bridge interdisciplinary concepts while encouraging interpersonal connections and a more broad view of the world.

Goal

- To help students better understand climate change, to promote participation in climate solutions, and to gauge anxiety levels

Focus Questions

Does exploration of injustice, centered around climate change increase students understanding of climate change?

How are students motivated to participate in solutions to climate change after exploring examples of injustice?

How does highlighting societal effects of climate change impact students' anxiety levels?

Data collection

Student Climate Surveys

Student Reflection

Student Interviews

Treatment

- All students in my Biology classes ($n = 46$) researched two projects centered around climate change and justice including: 1) human health impacts & 2) societal impacts. Data collection took place at the following times

Before research, after health effects research, and after societal impact research

After health effects research, and after societal impact research

Conclusion of the study

RESULTS

Claims – Key Findings

- (a) Student levels of eco-anxiety were underreported from survey and reflection data compared to interview data
- (b) Student's understanding of climate change improved over the test period, but not enough data was available to gage the entire test group
- (c) Student participation throughout the study was inconsistent and made data analysis difficult
 - Survey data was separated into two data sets: Data set A represents all survey participants and Data Set B represents students that participated in both the pre- and post-survey
 - Results from Data Set A and B varied between categories

EVIDENCE – REASONING

- (a) Class survey data indicated approximately 15.5% of respondents felt anxious in various ways after the study, while approximately 33% of interviewed students reported feelings of anxiety around climate change
- Students are regularly exposed to climate change information, but focusing on impacts on humans makes the changes more personal
- (b) Student understanding improved in survey and reflection data, but these data were obtained from 49% of the class. In general, higher achieving students participated more consistently compared to lower achieving students.
- Without more consistent participation, results of student understanding of climate change are inconclusive.
- (c) Survey data was collected from 89% of students in phase 1, 56% in phase 2, and 53% in phase 3. Student reflection data was collected from 73% of students in phase 2 and 51% in phase 3.
- Many students are reluctant to participate in activities that are not worth points in the grade book

DATA ANALYSIS

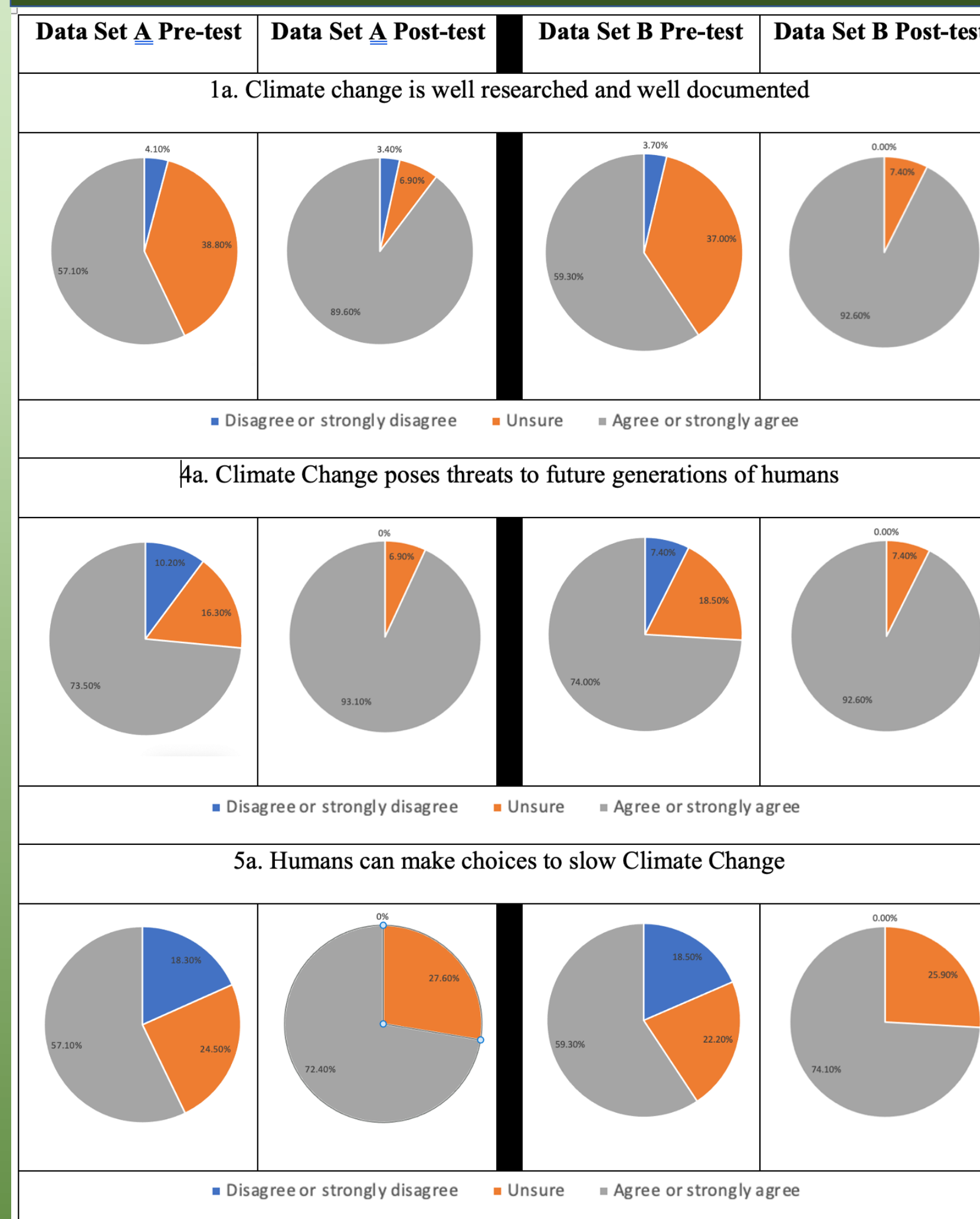


Figure 1. Student climate survey summaries, questions 1a, 4a, and 5a comparing changes in student understanding of climate change between phase 1 and phase 3, from data sets A and B

CONCLUSION

- Through focusing on impacts on humans many students connected to climate change content, especially those disproportionately affected.
- The research projects used to guide student through exploration of impacts on humans from climate change will need to be revised and implemented to reach more students in future courses.
- More participation from students and larger sample size (more classes) will be important for establishing more reliable conclusions

Next Steps

- This study has motivated the researcher to improve how we study climate change through a social justice lens. This experience will guide continuous improvement in designing research projects for students to better connect with human health and societal concerns linked to climate change
- This study has motivated the researcher to incorporate more examples of social justice into Biology curriculum
- Interviews and reflection will become more common in the researcher's curriculum to better connect with students perspectives on content and social-emotional health in education.