Affecting Social Change Through Research for Multi-disciplinary International Students

Deborah M. Sanchez, Ed.D
Aimee Weinstein, D.A.

September 21-25th, 2020

INTO
GEORGE MASON
UNIVERSITY

An Introduction: English for Academic Purposes 507/508

- INTO Mason - International graduate students from various disciplines
- Co-taught by a composition specialist and a language specialist
- A team of INTO and English department faculty regularly co-teach the course
- Final deliverables: **Literature Review** and Poster Presentation

The Mission of George Mason University

"...we are an innovative and inclusive academic community committed to creating a more just, free, and prosperous world."

https://www2.gmu.edu/about-mason

Impetus for Project change

- Our team noticed that many projects focused on "how to make money" for businesses; market-oriented research projects
- We had a desire to encourage research projects which align more with the mission of GMU
- Many students come from parts of the world where the climate crisis is negatively affecting their communities

Team Conversations

- Can we mandate a social exigence for the students?
- If we do have a program-wide focus for all of the students, can all disciplines connect with the social problem we choose?
- We are trying to teach three types of rhetorical exigencies:
  - Personal - why do I want to do this project?
  - Social - what is the problem in the world that I can address with this project?
  - Research - what gap in "the literature" can I address with this project?
- All disciplines can connect to the challenge of climate change

Begin with a Model Literature Review

- Students' final project is a literature review
- They start by reading a lit review which models how any discipline can connect to the global climate crisis.

CLINICAL REVIEW

Climate change and sleep: A systematic review of the literature and conceptual framework

Daniel I. Rifkin [a, b, *], Michael W. Long [a], Melissa J. Perry [a]

[a] Milken Institute School of Public Health, The George Washington University, Washington, DC, USA
[b] Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, Buffalo, NY, USA

ARTICLE INFO

SUMMARY

From disaster related stress causing insomnia, to poor air quality causing sleep related breathing problems, climate change poses a potentially serious threat to human sleep. We conducted a systematic review evaluating the relationship between climate change and human sleep in the PubMed, Scopus, and Cochrane databases from 1980 through 2017 following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Inclusion criteria included epidemiologic studies published in English that reported observational population data on human sleep and its relationship to climate change, temperature, extreme weather events and climate related disasters (e.g. hurricanes, floods, and wildfires). We excluded non-human studies, laboratory or experimental physiology studies, commentaries or letters, review articles, and articles on wind turbines. Using a systematic search strategy, 16 studies met the inclusion criteria. Six studies related to the effects of rising temperature, seven studies related to extreme weather events, and three studies related to floods or wildfires. Diminished total sleep times and sleep disruption were most commonly reported, especially among the most vulnerable populations including the elderly and low-income; however, the body of evidence was limited and further well-designed human studies are clearly needed. We present a conceptual framework for identifying the emerging threats of climate change and understanding their respective effects on human sleep.

Activities which helped students make the connection

Curiosity journal

- a brainstorming exercise to help decide on a semester long project
- *Sample questions*: How is climate change affecting communities in your native country? In the world?
  Why are these issues important to you?
  What are some topics in your discipline which might relate to the negative outcomes listed above (disease, displacement and death of people and animals) or others not mentioned?

Conversations with group members

Academic writing and research is a "conversation" among scholars

Project examples

1. Using R and GIS to visualize the correlation between rainfall and malaria prevalence due to global warming (*Data Analytics/GIS*)

2. Addressing challenges and opportunities of genetic modification technologies related to agricultural production with climate change (*Bioinformatics/Health Informatics*)

3. The impact of climate change on classroom environment and student motivation (*Educational Psychology*)

4. Age differences in the effect of using social media to the recovery of social networks for climate migrants (*Industrial and Organizational Psych/Cognitive Psychology*)

Next Steps

- Normally we do a multidisciplinary colloquium but we could not in Spring 2020
- We did not mandate a social exigence for Fall 2020
- We hope to go back to the experiment next term - and have a colloquium to present projects all based on the same social exigence

Questions?

Aimee Weinstein, D.A.   aweinste@gmu.edu

Deborah M. Sanchez, Ed.D.   dsanch12@gmu.edu