



Collaborative Research Labs

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and Andrea Lee

What is a Collaborative Research Lab?

- The COE encourages faculty and students in the college to work collaboratively with each other as part of a research lab to further their ongoing research agendas. Faculty can create a research lab where they can work with students to conceptualize, develop, implement, present, and publish research in their chosen contexts. These labs are designed to 1) help propel the research agenda of participating faculty and 2) help engender a collaborative and structured space for students to explore their research interests, especially as it may pertain to their graduate (or undergraduate) research projects (e.g., master's projects or dissertations).

Lab for Explorations of the Nature of Science for Equitable Sustainability

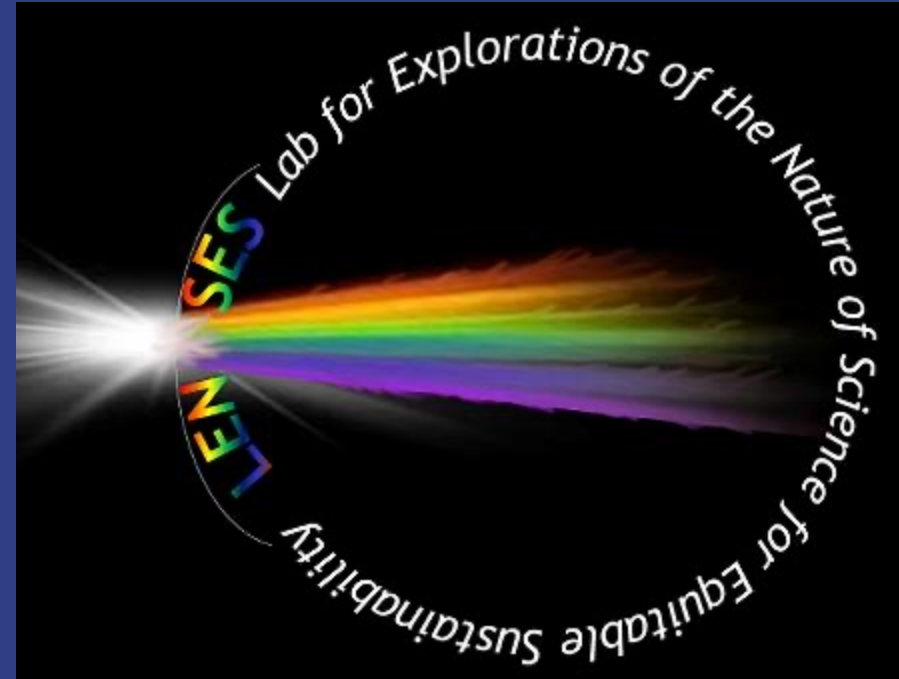
Faculty Advisors:

Dr. Philip C. Short

Dr. Donna F. Short

LENSES

LENSES is focused on understanding factors contributing to or detracting from educational efforts to increase scientific literacy, improve awareness and action on environmental and other socioscientific issues, and applications from integrated STEM content. A fundamental objective of LENSES is to achieve a more diverse and equitable research community, which is inherently necessary for novel insights and approaches.



Some areas of research interest in LENSES are listed below. This list is not exhaustive, and we await you to bring new questions, perspectives, insights, and energy.

- Performance measures of cost-effective, inquiry-based STEM education strategies;**
- Integration of science with other disciplines for place-based relevance to students' personal and societal issues;**
- Tangible measures of positive personal and community impacts linked to Environmental Education programming (i.e., Environmental careers, personal sphere behaviors, public sphere actions, quantitative analysis of environmental protection or improvements);**
- The interplay of science and society as an influence on equity and social justice issues in education;**
- Relative values afforded to basic versus applied sciences in PK-20 education;**
- Policies and strategies for hands-on science in an online world;**
- Projecting the voices of those most impacted by sustainability issues.**

Reading and Executive Function Lab

- The lab explores various topics related to executive function and reading. The main topics include two main areas (1) how executive function (working memory & cognitive flexibility) mediates the relation between socioeconomic status and reading development and (2) literacy strategies that science teachers use in their instruction/the relation between reading ability and science achievement.
- Lab members will develop associated skills and abilities related to conducting quantitative research (e.g., systematic literature searches, coding articles, research design, secondary data analyses, data collection, manuscript preparation, and presentations).
- This lab ensures that students have research opportunities, with both lab work and their own research projects.





- To understand how executive function mediates the relation between socioeconomic status and reading development by analyzing complex, secondary data.
- To investigate how science teachers use literacy strategies/relation between reading ability and science
- To translate research to practice through the publishing of practitioner focused articles
- To seek external funding

Data As The Answer Research Lab

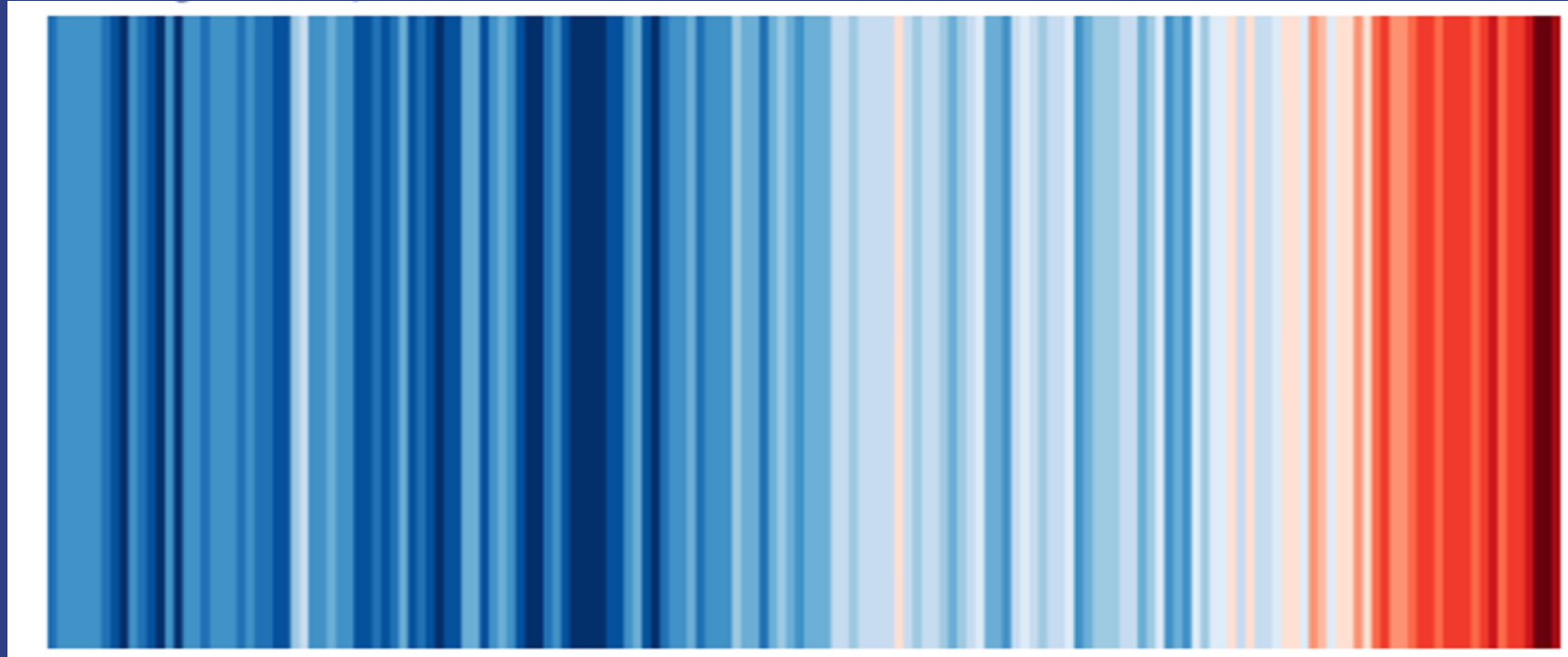


Dr. Hanrui He
Dr. John McConnell



- An academic team of students, faculty advisors, and visiting scholars who are motivated to take an active role in conducting institutional research using large, secondary data set analysis.

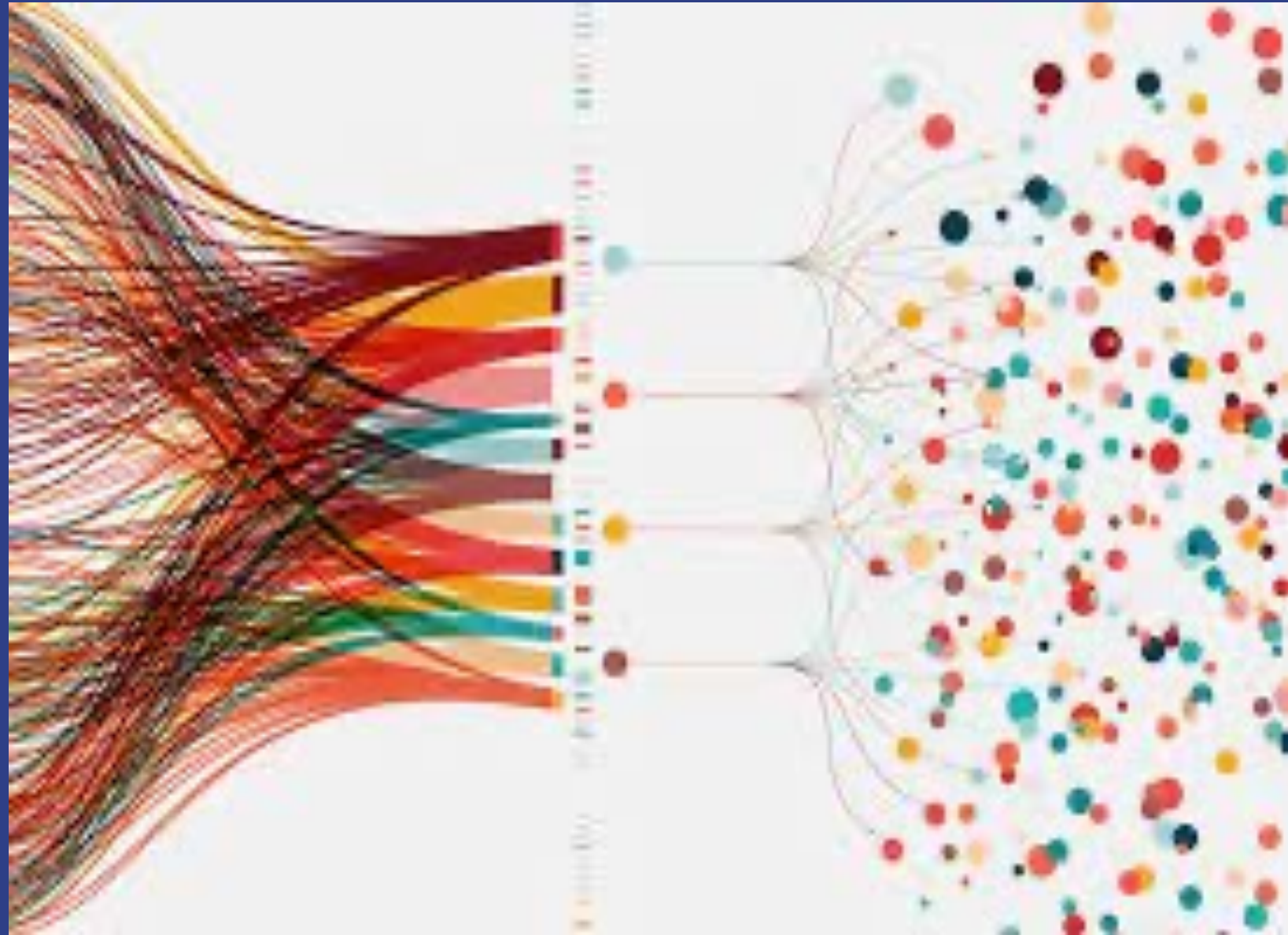
They say that a
picture is worth a
thousand words...



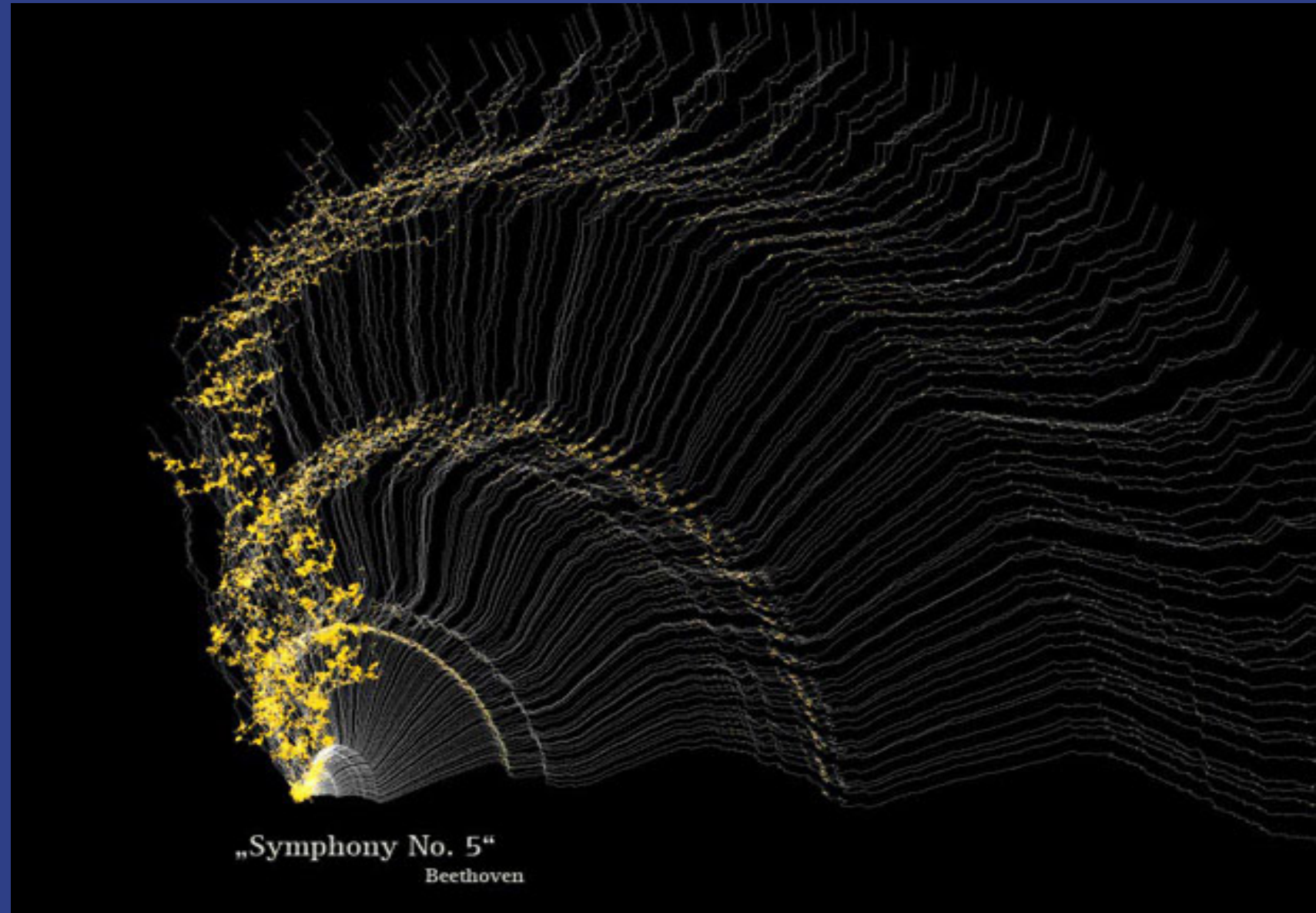
Well, a graph can be worth a million numbers...



Countless solutions...



Or a symphony of instruments working toward a more harmonious end.

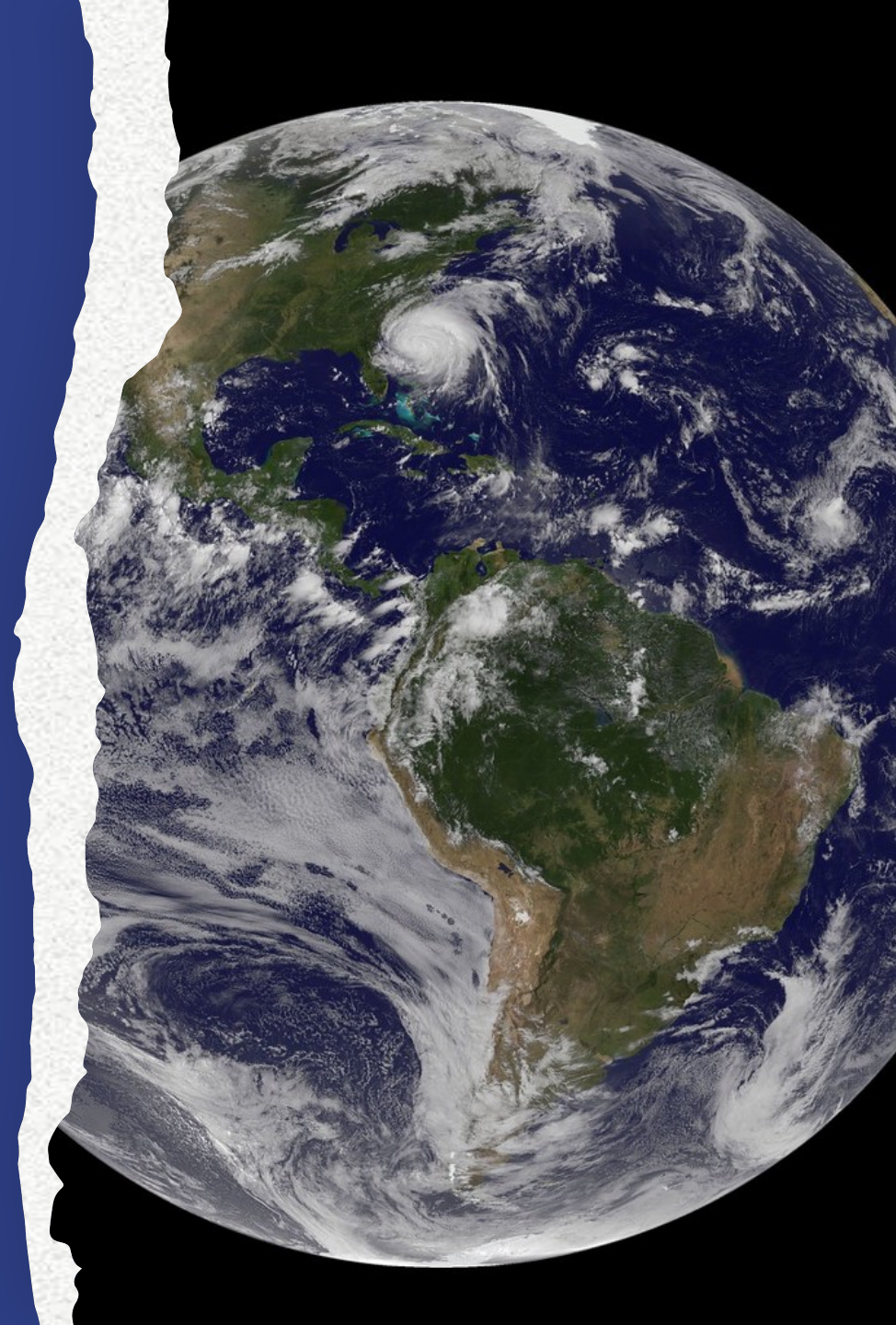


Data is everywhere
We just have to make sense of it

Data As The Answer
Toward a more harmonious end

Virtual Educational Research Lab/Applied Linguistics Lab

- **Faculty member:** Andrea Lee
- **Student Members:** Elizabeth Harrison, Michael Hidalgo, Jessica Rozell, Lafateia Nauheimer, Cavelle Gongga, Brian Dunn, Ashley Kautz
- **Alumni:** Zachary Inman, Kisha Napper
- **Visiting Scholars:** Dr. Norah Almusharraf (Prince Sultan University, KSA), Dr. Daniel Bailey (Konkuk University, South Korea), Dr. Ndidi Okeke (Nnamdi Azikiwe University, Nigeria), Marianthi Kontelli (The University of Toronto, Canada), Farinaz Dastpish (Istek Schools, Turkey)



Who We Are/Who Should Join?

- The lab is open to faculty and students at Austin Peay State University, Konkuk University in South Korea, Prince Sultan University in Saudi Arabia, and Nnamdi Azikiwe University in Nigeria. External scholars may be considered.
- The lab aims to promote research development and joint research programs focusing on education and educational policies.
- We also want to encourage researchers and members, including faculty, graduate, and undergraduate students, to participate, contribute, and conduct research projects that serve the educational sector. Although most participants will likely be from education and language/linguistics departments, students and faculty outside of these fields are welcome to join if they are interested in these research areas.

Goals

- Exchange of expertise/knowledge in shared fields of interests
- Conferences and symposium participation
- Joint research programs and activities
- Conducting training courses/workshops
- Obtaining external funding
- Publishing high-quality papers in Scopus and SSCI-indexed journals



Advice for Creating or Joining a Lab



Possible Topics for Discussion

- Community Engagement and Outreach
- Cross-institutional Collaboration and Interdisciplinary Research
- Promoting Global Perspectives and International Partnerships
- Leveraging Digital Tools and Technologies
- Integration of Research Findings into Evidence-Based Teaching Practices
- Addressing Ethical Issues
- The Role of Undergraduate Students, Graduate Students, Alumni, and External Scholars
- Fostering Mentorship and Professional Development Opportunities
- Challenges
- External Funding and Grants
- Data Collection and Analysis
- Research Dissemination
- Examining Emerging Trends in Education