Earth System Science (ESS)/GLOBE Collaborative Teams: A process to build and support teams for ESS education

Executive Summary

The University Corporation of Atmospheric Research (UCAR) GLOBE Implementation Office (GIO) and the UCAR Center for Science Education (SciEd) facilitated the development of seven Earth System Science (ESS) Collaborative Teams with remote learning opportunities over two-years culminating in a workshop in July 2022. The purpose of this project was to study how the ESS collaborative model, developed in Colorado, could be replicated, and adapted across GLOBE regions. Objectives of the workshop included:

- Generate discussions between and among teams to share ideas, resources, and expertise; to increase collaboration and improve ESS education within their defined area of influence; and
- Develop/refine short/mid-term plans and define participating networks to accomplish the objectives relevant to improving ESS education.

Initially, it was important to articulate and communicate the vision of the project, develop a recruitment plan, and design and distribute the application among US GLOBE Partners. After review of the applications based on the expertise/experience of the team leads, alignment of goals, and the composition of proposed teams, seven collaborative teams were accepted. Criteria for selections were based on demonstration of leadership, diversity of the team and commitment of the members to support each other, variety of audiences reached, geographic range, and engagement in ESS/GLOBE. This initial effort required frequent communications between project developers, team leads and their prospective team members, and between team leads, their members and the project team.

Once selected the project leaders worked to define a process to support ESS collaborative team development within the seven teams. This phase again was very reliant on frequent communications. Team development was envisioned as an organic process from within each team. There was no 'blueprint' or requirement from project leaders but rather encouragement, suggestions, and resources. An unforeseen impact on this phase was the COVID-19 pandemic. The restrictions placed on travel and in person gatherings required a strong effort to facilitate communications with the tools at hand. Websites for each team and the project were supported on the GLOBE website while using Internet

based conference tools (such as ZOOM), newsletters, and email, all provided avenues for collaborative efforts to evolve within each team.

With the COVID-19 travel restrictions lifted in late 2021, a series of virtual meetings with the teams determined their priorities for an in-person workshop in the summer of 2022. Project Leads worked with an internal evaluator to develop questions to both assess the priorities from the teams for the workshop and to develop survey questions to assess the extent to which its goals were met. Project leads then used the priority questions to engage teams in a conversation to develop the workshop agenda. Climate Change was a topic of interest as well as time to meet as a team. Strong support was expressed for ways to reconvene as a larger, all teams group in the future which could include scheduled get-togethers at such events as GLOBE Annual Meetings or GLOBE North American Regional Meetings.

Based on the observations and evidence collected from this two-year project, the approach employed was viable to build and support ESS education and outreach collaborative teams across geographic locations in the United States, thus replicating the Colorado model.

For any questions or comments on the ESS Collaborative project, please contact:

John Ristvey, Director
UCAR Center for Science Education
University Corporation for Atmospheric Research
jristvey@ucar.edu

303-497-2591
3090 Center Green Drive
Boulder, Colorado, 80301, USA

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