UCGIS Education Committee Report

UCGIS Annual Symposium 2020

This report covers the activities of the Education Committee for the period of June 2019 (UCGIS Symposium in Washington, DC) to May 2020 (Online UCGIS Symposium).

Steven Moore, University of Redlands, continued as committee chair during 2019 – 2020. Eric Shook, University of Minnesota, served as Vice Chair. The current education committee is composed of: Ola Ahlqvist (The Ohio State University); Forrest Bowlick (University of Massachusetts); Patricia Carbajales (Clemson University); Laure Charleux (University of Minnesota, Duluth); Jerry Davis (San Francisco State University); Lee Hachadoorian (Temple University); Paddington Hodza (University of Wyoming); Karen Kemp (University of Southern California); Helmut Kraenzh (James Madison University); Xingong Li (University of Kansas); Tim Nyerges (University of Washington); Miriam Olivares (Yale University; Jennifer Swift (University of Southern California); Laura Tateosian (North Carolina State University); and Danny Vandenbroucke (KE Leuven). Two members left the committee during this reporting period: David DiBiase (Esri [Retired]) and Sven Fuhrman (George Mason University). One new member—Patricia Carbajales—joined the committee in May 2020. The membership of the committee—both delegates and non-delegates—was confirmed by the Board at its May 20, 2020 meeting.

Major activities included the following:

1. **Participating in the 2019 Symposium**

   The Education Committee held a pre-symposium workshop and education session at the 2019 UCGIS Symposium. Entitled "GIScience Education Challenges: Mapping Out the Coming Decades, or at Least, the Next Five Years!", the workshop kicked off an effort by the committee to update GIScience priorities identified by UCGIS in 1997. During the "Education, Training, and Geospatial Domain" session held on Wednesday of the symposium, committee members and other UCGIS educators presented work on cyber literacy, the GIS&T Body of Knowledge, the European Body of Knowledge, and GIS&T program accreditation.

2. **Deciding 2019 – 2020 Committee Priorities**

   During its August 2019 meeting, the Education Committee decided to focus on four priorities for the coming year:

   - Distilling the results of the 2019 workshop on GIScience education challenges into one or more white papers or peer-reviewed publications.

- Defining the purpose, authority, and purview of the Education Committee, as well as its meeting schedule and expectations of contributions by members.

- Revising guidelines for the annual education award with an eye towards promoting greater inclusiveness and recognition of early career GIScience educators.

- Moving the idea of a GIScience education referatory forward.

3. **Defining the purpose, authority, and purview of the Education Committee, as well as its meeting schedule and expectations of contributions by members.**

   During the summer of 2019, the committee was charged by the Board to update it purpose, authority, and purview, as well as its meeting schedule and expectations of contributions. The committee discussed these items during the September and October meetings, eventually producing the following statement:

   Purpose, Authority, and Purview (from the bylaws)

   The Education Committee considers priority issues in geographic information science education and public service from which positions, policies, and strategies may be recommended for implementation by UCGIS and its Members at local, state, national, and international levels. Major issues might include trends in enrollments, adequacy of the number of graduates and their skills to meet marketplace demands, curriculum and courses, innovations in education, role of faculty and institutions, and other issues that affect education in geographic information science.

   Meeting Schedule

   The Education Committee meets monthly by webconference during the fall and spring of each year and as needed during the summer. The committee also has a face-to-face meeting during the annual UCGIS Symposium. If feasible, the meeting is broadcast by webconference to members who are not present at the symposium.

   Expectations of Contributions

   To maintain good standing with the committee, members are expected to attend meetings and actively contribute to the accomplishment of one or more of its priority goals. Participation in the committee will be reviewed periodically by the committee chair and non-participating members will be removed from the roster.

4. **Revising guidelines for the annual education award with an eye towards promoting greater inclusiveness and recognition of early career GIScience educators**

   Responding to feedback from the 2019 UCGIS Education Award Committee that the existing nomination criteria favored educators with a well-established record of achievement and

impact, the Education Committee decided to create a new award that would be offered biannually beginning in 2020. The new "Innovation in GIScience Education Award" would alternate with the existing award, now called the "UCGIS Lifetime Achievement in GIScience Education Award." As stated in its nomination criteria, the Innovation in Geoscience Education award is intended to recognize innovative contributions of both national and international significance to GIScience education. GIS education innovations may include, but are not limited to:

- Implementing new ways to be inclusive and equitable in GIS Education, including access to geospatial technologies, including desktop, cloud, or high-performance computing.
- Developing innovative learning techniques (online and/or in classrooms or beyond).
- Enabling students to analyze new types of geospatial data or use emerging geospatial technologies (for example, mining geospatial content in social media, using cyberinfrastructure, or collecting data using drones).
- Developing opportunities that enable students to create rapid turn-around results to meet pressing community needs (e.g., developing protocols and strategies that allow students to quickly assist non-profit organizations or government entities in local emergencies)
- Creating curricula or coursework that embed opportunities for GIS students to participate in finding solutions to global crises (e.g., disease outbreaks, refugee crises, UN Sustainable Environment Goals, or Wicked Problems).
- Equipping GIS students to effectively disseminate authoritative geospatial scientific findings regarding complex societal issues (e.g., through training in science communication or visualization).

5. **Deliberating the 2020 UCGIS Innovation in GIScience Education Award**

A call for nominations for the 2020 award was distributed in December 2019 and repeated in January 2020. One nomination was received. A review committee was established that included Steven Moore (University of Redlands, Chair), Forrest Bowlick (University of Massachusetts), David DiBiase (Esri, retired), Jennifer Swift (USC), and Laura Tateosian (North Carolina State University). After deliberation, the committee decided that the nominee was better suited for the UCGIS Lifetime Achievement in GIScience Education Award. Accordingly, no innovation award was given in 2020. The 2020 nominator was encouraged to resubmit the nomination package for consideration by the 2021 award committee.

6. **Moving the idea of a GIScience education referatory forward.**

During fall 2019, David DiBiase created a strawman referatory entry that was reviewed by the Education Committee. Miriam Olivares volunteered to work with David to move referatory idea forward. Work on the referatory concept continued but was disrupted by

the pandemic. Dr. Olivares plans to continue the effort as a focus of her participation on the Education Committee.

7. **Transitioning to new leadership**

In June 2019, I agreed to extend my tenure as Chair of the Education Committee until June 30, 2020 so that the chair rotation would coincide with the regular UCGIS calendar (my three-year term would have ended in January 2020). In February 2020, Forrest Bowlick volunteered to be the next chair of the committee. He will assume his duties on July 1, 2020.

Respectfully submitted,

Steven Moore

Chair, UCGIS Education Committee

May 20, 2020