

iEMBER 2018 Report
iEMBER was started with RCN-UBE Incubator from the NSF (award #1624169)

Major Goals :

The goal of the Inclusive Environments and Metrics in Biology Education and Research (EMBER) incubator project is to establish an RCN-UBE network to coordinate efforts of researchers with interests in diversity from the education, biology, psychology and sociology fields to focus on expanding our understanding of how to create inclusive, supportive and engaging environments to foster the success of diverse students in bioscience education and research.

During the iEMBER incubator activities members identified two goals to address going forward. One is that to advance knowledge, there is a need to break down silos separating the diverse fields represented in iEMBER and the wider scientific community. The other is that to achieve societal benefits, stakeholders in biology education, training and research programs must be engaged. The no-cost extension activities initiated progress on these goals by having interdisciplinary members attend discipline-specific conferences to engage stakeholders within these communities.

RCN-UBE Incubator: EMBER Activities/Objectives

- Create a Website
- Organize Workshop (2017 iEMBER Conference)
- Advertise for Website and Workshop
- Create Interaction Forum
- Publish Workshop Meeting Report
- Write Full RCN proposal

RCN-UBE Incubator: iEMBER No-Cost Extension Activities/Objectives for 2018

1. Organize and Conduct an additional workshop granted at the National Association of Biology Teachers Conference on November 11, 2017
2. Create Interaction Forum
3. Publish Meeting Report
4. Write Full RCN proposal
5. Conduct Start-up Proposal Meetings for EMBER collaborators

Upcoming Events

A Small Business Meeting And Mini-Conference Is Planned For April 2019

Through the generous support of the Harris-Stowe State University Provost, the iEMBER network will be able to host a one-time mini-conference and business meeting on April 4th-5th 2019 at Harris-Stowe State University in St. Louis. The April 2019 meeting will include discussion sessions for building a sustainable network, lightning talks followed by networking activities, a diversity/equity/inclusion student keynote, and a mini-pitch competition.

Join iEMBER members at upcoming conferences and meetings

Society for Personality and Social Psychology

Midwestern Psychological Association

National Conference on Race and Ethnicity in American Higher Education

Gordon Conference on Undergraduate Biology Education Research

Major Activities

1. Organize and Conduct an additional workshop granted at the National Association of Biology Teachers (NABT) Conference on November 11, 2017

iEMBER facilitator leaders held monthly virtual meetings leading up to the iEMBER session granted at the NABT conference. Based on the success of this experience, additional iEMBER interdisciplinary teams organized more professional development and outreach activities aimed at building the iEMBER network at other national/regional conferences (listed below). These teams also held monthly virtual meetings to organize proposals and activities.

The sessions organized by iEMBER members at discipline-specific conferences (listed below) reached more than 200 individuals. These sessions were not only opportunities to engage in outreach, these activities also allowed iEMBER to expand from 31 initial members who attended the 2017 iEMBER conference to more than 70 individuals who have asked to be informed of and participate in future iEMBER activities. As an example of impact, survey data from the AACU 2018 Transforming STEM Higher Education indicated that 86% of session participants had a better understanding of inclusion and diversity issues in STEM classrooms. As another example, the ASCB session leaders created a product for distribution to session participants. The 58 participants in the ASCB session identified diversity-equity-and inclusion barriers in the classroom and approaches to overcome them. Session leaders collected the participant input for this session, and organized it for distribution along with session slides and additional resources for the 51 participants who asked to receive it via email. Notably, every iEMBER organized event included an interdisciplinary session leader team with cross-disciplinary members:

2017 National Association of Biology Teachers: two psychologists

2018 Midwestern Psychological Association: biologist and communications faculty

2018 Society for the Advancement of Biology Education Research: psychologist and policy administrator

2018 (AACU) Transforming the STEM landscape: sociologist

2018 American Society for Cell Biology/EMBO: policy administrator/analyst

iEMBER Proposed/Organized Sessions At National/Regional Conferences

- **2017 NABT:** Building a Culture of Diversity and Inclusion in Biology Education and Research The Formation of the iEMBER Network; J. Marcette, M. Moore, E. Solomon, R. Tennial.
- **2018 MPA:** exhibitor booth: showcasing iEMBER partnerships and providing a place for meetings of current and prospective iEMBER members, R. Harvey, J. Marcette, F. Saffaf, J. Showell,
- **2018 SABER:** Bridging Worlds for Diversity and Inclusion: The Inclusion of Social Science with Biology Education Research Through the iEMBER Network, J. Reid, E. Weigel, A. Crowe, M. Moore, E. Solomon, R. Tennial
- Science Identity Intervention: Example of a collaboration between social scientists and biology education researchers through the iEMBER network A. Crowe, E. Cline, H. Heinz, L. Martinez, M. Moore, R. Tennial.
- **2018 (AACU) Transforming STEM:** Communities of Practice Supporting Diversity, Equity, & Inclusion in Biology Education & Research, L. Hammonds-Odie, C. Idlebird, J. Marcette, J. Showell

- **2018 ASCB/EMBO:** Creating Inclusive Biology Education Environments, (A. Crowe, L. Hammonds-Odie, J. Marcette, G. McDowell)

In addition to interdisciplinary teams, iEMBER members also presented posters that included iEMBER network information and held informal discussions at national/regional conferences to assist in building the iEMBER network (listed below).

- **2018 SABERwest:** (*poster presentation on iEMBER networking strategy project and network*) H. Heinz
- **2018 Center for Integrative Research on Cognition, Learning, and Education 2018 Conference,** (J. Marcette)
- **2018 National Association of Biology Teachers 2018 Conference,** Poster, informal meet-up, (M. Moore)

iEMBER facilitator leaders held business meetings at each conference. When possible, business meetings were advertised during the sessions and open to new/prospective iEMBER members.

- **November 2017 –NABT** (M. Moore, J. Marcette, J. Reid, E. Solomon, R. Tennial)
- **March 2018 – MPA** (R. Harvey, J. Marcette, M.Kennedy, C. VanDunk, F. Saffaf, J. Showell)
- **July 2018 -SABER National Meeting** (A. Crowe, H. Heinz, L. Martinez, M.Moore)
- **November 2018 -AACU** (S. Horrell, L. Hammonds-Odie, N. Caporale)
- **December 2018- ASCB** (A. Crowe, S. Brownell, K. Cooper, J. Marcette)

2. Create Interaction Forum

An interaction forum using the SLACK platform was created, however most iEMBER teams/groups communicate using googledocs or other personal systems. The feedback received both at the 2017 iEMBER conference and in subsequent business meetings has been that a more robust website and interaction forum (outside of the scope of the incubator budget) will be necessary to provide cohesiveness and administrative feedback for future research coordination efforts. The proposal team preparing a full iEMBER RCN-UBE proposal for the 2019 funding cycle, has an MOU from qubeshub.org that will meet the research coordination needs of the network.

3. Publish Meeting Report

Weekly virtual meetings were held by the co-author team listed below from January 2018-March 2018, and as necessary through final acceptance in September 2018. The report is currently in press: Tennial, R., Solomon, E.D., Hammonds-Odie, L., McDowell, G., Moore, M.E., Roca, A.I., & Marcette, J. Formation of the Inclusive Environments and Metrics in Biology Education and Research (iEMBER) Network: Building a Culture of Diversity, Equity, and Inclusion, CBE-Life Science Education (Accepted 08-13-2018)

4. Write Full RCN Proposal

Meetings of the RCN-UBE-iEMBER full network proposal writing team have been ongoing since August 2018. Bi-weekly virtual meetings were held from August 2018 through October 2018, and weekly meetings were initiated in November

2018. **Steering Committee Members include:** Jana Marcette, Ph.D. (PI) Assistant Professor of Biology Harris-Stowe State University; Rebecca Campbell-Montalvo, Ph.D. Postdoc, Department of Curriculum and Instruction, U. Connecticut; Natalia Caporale, Ph.D. Teaching Assistant Professor, University of California-Davis; Richard Harvey, Ph.D. Associate Professor of Psychology, St. Louis University; Candice Idlebird, Ph.D. Assistant Professor of Sociology, Harris-Stowe State University; Gary McDowell, Ph.D. Executive Director, Future of Research; Michael Moore, Ph.D., Postdoc in STEM Education and Instructor, Dept. of Biology, Baylor University

5. Conduct Start-Up Proposal Meetings For iEMBER Collaborators

The Sci-identity working group formed as part of the iEMBER novel networking start-up pitch competition, is a diverse team (including members, listed below, that represent Biology Education, Psychology, and STEM Policy areas, including one post-doc member, and reside in four different states –AR, IL, TX, WA). This group has an active IRB at the University of Washington, wrote a successful proposal to share their experience in a SABER national meeting round-table session, and has future coordination activities, including an in-person meeting at the University of Washington for January 2019 that are independent of RCN-UBE-Incubator: iEMBER funding. Sci-identity Working Group Members: E. Cline, A. Crowe, H. Heinz, L. Martinez, M. Moore, R. Tennial.

Additional Activities

The website was updated during the no-cost extension year: a link (iEMBER.org) was enabled, pages were added to describe current iEMBER projects, to invite people to join us at upcoming conferences and to describe the interaction platform (SLACK), and how to join a current working group.