

## Mid-Year Highlights of the Hewlett Foundation Grant Award to Bates College: Supporting More Equitable And Sustainable Open Education In Undergraduate Biology

Bates College aims to strengthen and build faculty capacity to reform undergraduate STEM education through the QUBES and SCORE networks. This report highlights progress completed at this time to support the sustainability of the QUBES network, collaborations to develop and research OER for undergraduate biology, and faculty mentoring networks to build capacity and understanding of equity and inclusion. These initiatives align with the Hewlett Foundation Education Program's strategic goals to develop OER infrastructure, pedagogy, and practice to support diverse learners.

**Sustainability of QUBES.** QUBES is a community of individuals and organizations committed to accelerating STEM education reform through a supported social-cyberinfrastructure which aims to enhance effective, accessible, equitable and inclusive teaching. The leadership team continues to meet weekly to develop a sustainability plan and determine the appropriate organizational structure for QUBES' future. At this time QUBES has:



**9200** registered users



**1139** resources available through QUBESHub



**95** total partners, **69** new groups formed last year



**27** proposal efforts last year

**Faculty Mentoring Networks (FMNs):**  
Faculty professional development



**57** total FMNS, **14** FMNs sponsored last year.

**621** overall FMN faculty participants  
**154** FMN faculty participants last year



FMN faculty participants will have likely impacted over **100,000 students** through reformed curricula/OER.

### Partners feedback of QUBES:

*“ QUBES provides a community of individuals dedicated to improving quantitative skills in our undergraduate biology community, an opportunity to connect to other individuals interested in this topic, and a platform in which to interact and build community around these topics.*

*“ QUBES provides a resource sharing platform, links to a ready-made audience, and profile/recognition that would be hard to replicate independently.*

*“ Thus far QUBES has been an optimal platform for bringing new faculty into our organization.*

**Mini-grant awards.** Funding was awarded to five mini-grant applications to support efforts in OER sustainability and/or promoting diversity, equity and inclusion. These awards include:

### CourseSource – QUBES



• **CourseSource**, an open-access journal of peer-reviewed teaching resources for undergraduate biological sciences will create a proof of concept as they collaborate with QUBES to begin integration of the CourseSource brand within the QUBESHub.

### MMHub - CourseSource



• **MMHub**. Math Modeling Hub, which aims to facilitate integration of mathematical modeling into classroom teaching, will collaborate with CourseSource in adapting their writing model for MMHub users to increase submission of OER materials to the MMHub platform.

### ISKME – SERC - CAST



• **ISKME**, an independent, education nonprofit whose mission is to improve the practice of continuous learning, collaboration, and change in the education sector will collaborate with SERC, Science Education Resource Center at Carleton College and CAST, Center for Applied Special Technologies, to expand existing framework of Universal Design for Learning and improve utilization of the framework and tagging ontology.

### SIMIODE – QUBES



• **SIMIODE**, a Systemic Initiative for Modeling Investigations and Opportunities with Differential Equations will collaborate with QUBESHub to integrate the SIMIODE platform within the QUBESHub for ongoing continued hosting and technical support.

### Diverse Book Finder

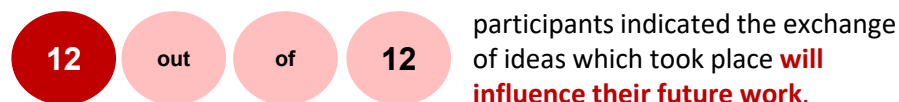


• **Diverse Book Finder**, a resource for librarians, educators, parents, etc. who seek to create collections in which all children can see themselves reflected within the picture books they read, will work to create a tagging of social-emotional learning curricula.

**S-JEDI Learning Community.** Seventeen individuals from the SCORE Network and OER organizations participated in 6-week long learning community comprised of readings, discussions, and reflections regarding how diversity, equity, and inclusion is/could be manifested within their OER efforts.



#### Influence in future work:



*“ I learned a great deal and participated in discussions around resources that have direct relevance to my professional interests. Building an action plan forced me to be concrete about my next steps.*

*“The course drove me to really think about my spheres of influence, and as such, made me realize that I can do more than I previously thought I could.*

*“ The discussions, informed by the assignments and readings, felt powerful, meaningful and relevant to my work and apply to considering the nature of education broadly. The group's collaborative efforts and shared expression, including the exercise to revise the mission statement felt very worthwhile.*

#### Usefulness of S-JEDI LC:

*“ [T]he exposure to a wide range of perspectives and ideas was useful in exploring these topics. Also, these are not discussions that are easily incorporated into typical professional interactions so having an opportunity to explicitly address challenging and uncomfortable topics provided a chance to not only learn, but practice how to have these discussions.*

*“ The discussions were very well moderated and put into action some of the very principles that we were reading about. The readings were challenging but organized in such a way that it help me to learn the landscape of issues and topics.*



An **S-JEDI Learning Group Resource** has been compiled and shared as on Online Resource within QUBES.

**STEM education Project Leaders Inclusivity Network (SPLINE)** is a peer mentoring network to support instructors, curricular developers, and OER stakeholders. Participants met weekly during July and August to determine how Universal Design for Learning; Inclusive Pedagogy, and Open Education practices can support and enhance their projects.

**100%** of participants felt the exchange of ideas that took place during SPLINE **will influence their future work.**

*“I found the exchange of ideas with other participants and mentors in SPLINE to be so valuable, and this will absolutely influence my future work as both an educator and as a content creator. The group of people had so many different backgrounds and perspectives, and the resulting exchange of ideas broadened my own understanding of these topics.*

**100%** of participants felt participating in the SPLINE program **will impact how Universal Design for Learning (UDL) is utilized in their work.**

*“The SPLINE experience around UDL, which included the mentoring, assignments, doing the homework, and the group discussions around the UDL guidelines, increased my understanding a lot and will guide how I can put this into practice in my work.*

**100%** of participants felt participating in the SPLINE program **will impact how inclusive pedagogy is utilized in their work.**

*“I looked at inclusive pedagogy in a different way after the SPLINE sessions. While I believe I had the best intentions in mind in the past while trying to be inclusive, I neglected a few groups and did not consider how receptive they'd be to my teaching or program style.*

**80%** of participants felt participating in the SPLINE program **will impact how open education practices will be utilized in their work.**

*“SPLINE introduced me to OER and I plan on incorporating aspects into my project and in other areas of my teaching. I also plan on sharing with my department to facilitate more engagement in these types of practices.*