

# Community Spotlight

Each <u>Community Spotlight</u> features an outstanding group, partner, resource, or member of our community.

## Open QUBES - A Faculty Use Case of Open Practice

By Sarah Prescott



## **Module Description:**

This weeks' featured resource is a poster that was presented at the <u>16th Annual</u> <u>Open Education Conference</u>. A note from the author and the poster abstract can be found below.

QUBES has been a critical component of my continued success as an open scholar. This poster details several of these outcomes with my lived experience working with QUBES as an Open scholar as a case study.

#### Poster Abstract:

One of the challenges faculty face with respect to developing and improving open educational practices is how to find, create and share resources in a central location. Finding resources that provide the infrastructure for online community workspaces to support open practice would be an ideal solution to this challenge. The Quantitative Undergraduate Biology Education and Synthesis (QUBES) project offers a solution as a space for resource sharing, community building, and project work. As part of my journey to and with open practice, I have used QUBES for creating open classroom activities, open publishing, working on group projects, participating in faculty mentoring networks, using new software and other tools, and cultivating a network of collaborators on various ongoing projects. QUBES has been a critical component of my continued success as an open scholar. This poster will detail several of these outcomes with my lived experience working with QUBES as an Open scholar as a case study. It will also discuss how it is a great example of an open

community of practice.

## **Teaching Setting:**

The information presented in this poster is of interest to science educators interested in open pedagogy.

### Citation:

Prescott, S. (2019). <u>Open QUBES - A Faculty Use Case of Open Practice</u>. QUBES Educational Resources. <u>doi:10.25334/PR5J-SC51</u>



### **Related Materials and Opportunities:**

As mentioned above, this poster was presented at the <u>16th Annual Open</u> <u>Education Conference</u>, which was held on October 30 - November 1, 2019 in Phoenix, AZ. To learn more about this conference, check out the <u>conference</u> <u>program</u> or explore the hashtag <u>#OpenEd19</u> on Twitter.

The author of this resource is a <u>QUBES Ambassador</u> who has participated in QUBES <u>Faculty Mentoring Networks (FMNs</u>), including the <u>2015 Agent-Based</u> <u>Modeling FMN</u>, in which participants implemented agent-based teaching modules using <u>NetLogo</u>, and the <u>2019 Serenity Now! FMN</u>, which focused on creating data-driven modules using platform-independent browser-based R applications Radiant and Serenity. The author has also attended several BioQUEST & QUBES Summer Workshops, most recently participating in <u>Evolution of Data in the Classroom: From Data to Data Science</u>, which focused on how data science practices can enhance biology education. The <u>2020</u> <u>BioQUEST & QUBES Summer Workshop</u> will be held on June 22-27, 2020 in Pittsburgh, PA. If you are interested in receiving information about this workshop, please <u>subscribe to updates</u>.

Not only has the author taken advantage of the QUBES cyberinfrastructure and resources to support her activities as an Open scholar, she has also engaged with several <u>QUBES Partners</u> and related groups, and cites these as essential elements of her "open cube of practice". Below you can find a few of the projects and resources that the author references in the poster. Click on their logos to learn more.



BEDROCK (Bioinformatics Education Dissemination: Reaching Out, Connecting, and Knitting-together) is an NSF-funded project aimed at integrating bioinformatics throughout the undergraduate biology curriculum, using an inquiry-based approach in which students explore and analyze actual data in a way that recreates the experience of conducting research.

## NATIONAL CENTER FOR CASE STUDY TEACHING IN SCIENCE

The <u>National Center for Case Study Teaching in Science (NCCSTS</u>) promotes the nationwide application of active learning techniques to the teaching of science, with a particular emphasis on case studies and problem-based learning.



<u>ScienceCaseNet</u> supports a community of science educators, learners, researchers, developers, and professional organizations interested in furthering the accessibility, development, and use of cases and problem based learning (PBL).



Science Education for New Civic Engagements and Responsibilities (SENCER), the signature initiative of the National Center for Science & Civic Engagement, is a national project focused on empowering faculty and improving STEM teaching and learning by making connections to civic issues.



OpenStax is a nonprofit educational initiative based at Rice University whose mission is to give every student the tools they need to be successful in the classroom. OpenStax publishes high-quality, peer-reviewed, openly licensed college textbooks that are absolutely free online and low cost in print.



**BioQUEST** actively supports undergraduate biology education through the collaborative development of open curricula in which students pose problems, solve problems, and engage in peer review.



<u>PeerWise</u> is an open question authoring tool that allows students to author questions, and also to answer other students' questions. The site allows for comments and ranking and also has a badge system to encourage students to participate actively with the tool.



<u>CourseSource</u> is an open-access journal of peer-reviewed teaching resources for undergraduate biological sciences.

QUBES on Social Media



<u>BioQUEST</u> is a transformative, collaborative community empowering educators to drive innovation in STEM education for all students.

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