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Documenting teaching scholarship among undergraduate biology educators using OER By Ahrash Bissell, Lauren Collister, Sam S Donovan, Drew LaMar, and Hayley Orndorf



Module Description:

This resource is a poster that describes the use, adaptation, and reuse of Open Educational Resources within the QUBES community. The poster abstract is below.

The Quantitative Undergraduate Biology Education and Synthesis (QUBES; qubeshub.org) project is designed to support faculty improving biology students' quantitative skills. Our primary strategy to this end involves engaging faculty in professional development and teaching activities that build their identities as teaching scholars. An important component of building a scholarly identity involves the production, public sharing, and documentation of educational materials. We have adopted an open publishing framework for capturing diverse examples of faculty scholarship and launched a series of online mentoring communities that support faculty participation. Our platform is a git-like system for managing OER creation within the HubZero scientific gateway infrastructure. It features version tracking, automated attribution for derivative works, license selection, DOI assignment, a suite of communication and collaboration tools around engagement with published materials (e.g., following, commenting, collecting), and tracking of metrics around their use (e.g., comments, views, downloads, forks).

Though few of the technical features in our system are novel, we believe that we have established an important use-case that demonstrates the potential for connecting professional development to participation in the full OER life cycle. Furthermore, we are in the process of collecting data about the use of OER publishing as an important component of documenting scholarly activities for use in evaluation, tenure, and promotion for faculty from diverse institution types. We have had more than 350 submissions representing many different authors. The QUBES teaching-resource collection includes several adaptations that reflect customization for different student audiences, use in different teaching contexts, data localization, and reworking for use with different analysis tools. We still face challenges communicating the goals, norms, and ethos of Open Educational Practices to undergraduate-biology faculty. We also face social and technical difficulties interfacing with existing education projects and sharing resources from other collections. Nonetheless, by situating OER practices within a strong professional network, where existing expectations and mechanisms of trust are already well established, we are seeing that many of the traditional impediments to the realization of a fully fledged OER life-cycle are either not present or relatively easy to overcome. We believe that other communities of practice with an interest in collaborative professional-development activities can learn from the QUBES example and easily adapt our approach to their needs.

Teaching Setting:

OER material on QUBES has been designed for a wide variety of teaching settings. Each resource includes descriptive tags that allow you to find teaching materials based on audience level, instructional setting, and activity length. Workshop material, publications, conference material, and datasets are also available in the growing QUBES OER collection. You are encouraged to find OER materials that are available through QUBES, adapt those materials to your educational setting, and share back your customized version of the resource using the QUBES OER platform.

QUBES Citation:

Ahrash Bissell, Lauren Collister, Sam S Donovan, Drew LaMar, Hayley Orndorf (2018). <u>Documenting teaching scholarship among undergraduate biology</u> <u>educators using OER. QUBES Leadership Team</u>, (Version 2.0). QUBES Educational Resources. <u>doi:10.25334/Q44T5R</u>



Related Materials and Opportunities:

The authors presented this poster at the <u>15th Annual Open Education</u> <u>Conference</u>, which was held on October 10 - 12, 2018 in Niagara Falls, New York.

We encourage you to <u>learn more about OER on QUBES</u>, <u>browse material freely</u> <u>available in the QUBES OER collection</u>, and <u>submit a resource</u>. QUBES on Social Media



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