

Science Education Colloquium

Can a MOOC Prepare College First-years for Introductory Biology?

March 3rd, 2-3pm, Natural Sciences Bldg. Auditorium, UC San Diego

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Bio:



Adrienne Williams has a PhD in biology, and was the Co-Director of the HHMI-UCI Professor program during its nine years. She has conducted and published biology education research, primarily on student success in large introductory biology courses. She has taught large lectures face-to-face, flipped, and online. She developed a MOOC in 2013 to prepare pre-college students to be more successful in introductory biology. Currently, Adrienne is the Assistant Director for Digital Teaching and Learning at UC Irvine's Center for Engaged Instruction. She provides evidence-based pedagogy support to undergraduate faculty who are managing larger class sizes, decreased TA support, and increasing non-traditional student populations.

Abstract:

Our assessment of failure rates in UC Irvine's introductory biology between 2005 and 2011 indicates a strong correlation between SAT scores and student performance. Under-represented minority students (URMs) and women are more likely to have low SAT scores and no AP biology and this contributes to the higher failure rate in these groups. When asked to create an introductory biology MOOC for UC Irvine, we elected to create a pre-freshman "preparation for introductory biology" MOOC that would give pre-UCI students free practice in critical thinking before their first college class begins. The Preparation for Introductory Biology MOOC was prepared and taught through Coursera in Summer 2013 and 2014. Incoming students who had chosen to enroll in Introductory Biology (Bio 93) were invited to participate in the online course, along with the general public. In this talk, I will discuss the effects of the MOOC on student performance in the subsequent course (the results were mixed). We will also discuss why the online environment has not been ideal for teaching URM students in the past, and what might be done to overcome this.