

“Sex from molecules to Elephants” – lessons from producing and teaching an innovative MOOC

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Abstract

Engaging students in MOOCs (massive online open courses) has been a major challenge ever since their introduction more than a decade ago. The completion rates of most MOOCs is unfortunately exceedingly low posing a big question mark over this promising novel teaching method. This talk will describe how we conceived and produced a highly innovative MOOC, teaching science to thousands of non-science university students while achieving a successful completion rate of above 90%. To engage learners intellectually and emotionally we combined carefully written narratives with videos we shot in some of the wildest and most beautiful locations in the world. By learning about reproduction, students are taught cell biology, genetics, evolution, animal behavior and gain insights into conservation and awareness to environmental issues. In this talk we will share the process of production from the initial ideas to final product and describe challenges faced and experiences gained. We collected detailed engagement data for all students for all 60 videos of the course, all 40 quizzes and all five assignments students had to post in a forum or social media. In addition, we have detailed feedback forms of more than 6000 students with numerical and free text feedback. Using this extensive amount of data we shed light on how to effectively teach online in a large university setting as well as in smaller high school classes.

Keywords: eLearning, MOOC, science teaching, pedagogy, higher education