

INCREASING STUDENT MOTIVATION IN ASTRONOMY; ONLINE AND IN THE CLASSROOM

Kate Jackson

Presenting Author: Kate Jackson (kate.jackson1@unsw.edu.au)
School of Physics, The University of New South Wales, Sydney NSW 2052, Australia

ABSTRACT

Student motivation is a perennial problem in all stages of education. Most students find astronomy a fascinating and intriguing topic, but even in astronomy courses, it can be a struggle to maintain student motivation. Students are extrinsically motivated, often by grades, but extensive research shows that intrinsic motivation leads to more positive outcomes, such as a growth mindset, better grades, lower academic misconduct, and more fulfilment in goals and achievements. The shift to predominantly online learning due to the COVID-19 pandemic has also played a significant role in student motivation.

This workshop is based on my design of astronomy assessments and courses to increase student motivation. I will outline my approach to addressing specific problems in introductory courses by leveraging research on student motivation. One aspect of this approach is giving students choice in part of their assessment; this is exemplified in the “Astronomy Picture of the Day” assessment I have developed. Another approach is designing a course in such a way that students can choose which astrophysics Python exercise they complete. Participants are encouraged to engage in discussions about courses they teach where student motivation could be an issue: how is low student motivation manifesting itself (e.g., poor academic integrity, low student attendance), and how can it be addressed?

Intended Audience: Undergraduate Physics Educators

PRESENTER



Dr. Kate Jackson is an Education Focused Senior Lecturer and Deputy First Year Director in the School of Physics at UNSW Sydney. She completed her PhD in theoretical astrophysics at Monash University (Melbourne, Australia) before pursuing her love of teaching. Kate has experience designing courses (having most recently designed introductory astronomy courses at UNSW), teaching large cohorts in astrophysics, physics, and biophysics, and has previously worked in educational design. Kate has been invited to deliver several workshops on teaching practice to new academics and presentations on her teaching innovations.

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