**Is Ownership an Emergent Property of Authentic Learning?**

Christopher

Imagine a course curriculum designed to inspire the next generation of astronomers by providing authentic learning activities that create personal ownership, and allow students to undertake real-world observational studies, that's what we'll explore today.

My name is Christopher Wolfe and in this project we'll be examining how a sense of psychological ownership can develop toward data among undergraduate astronomy students. We'll compare methods of data capture between courses which feature observational data capture, and courses in which students are given real astronomical data from existing scientific databases.

Literature suggests that ownership may arise from any sufficiently authentic owning activity, but we seek to understand if this is the case and both forms data acquisition and whether there's a measurable difference in the essential quality between the two modes.

Lastly, we will seek to discover if these ownership feelings correlate with the outcomes of the modules. Students undertaking observational projects will have access to the remote PIRATE Observatory where they will play various roles in the team to acquire data in real time or via a scheduler. Students undertaking non-observational projects will be given data collected from science missions such as the Sloan Digital Sky Survey and simulations of cosmological models and the cosmic microwave background.

The project methodology will include surveys, focus groups and interviews to collect data from the students in each group across a number of cohorts for the duration of the project. Mixed methods data analysis will then be used to investigate the development of these feelings and determine whether they positively influence module performance and student experience.

The outcome of the project hopes to inform future curriculum design in astronomy and astrophysics to bring the curriculum to life and help The Open University to develop students to be skilled scientists in their fields.