ECoach | **Learning Impact Awards Submission**

The Challenge

In large courses with hundreds of students, one-on-one interaction between instructors and students is difficult or even impossible. Dr. Tim McKay, the founder of ECoach, had this problem in his 900-student physics courses. He wanted to help individual students succeed in their studies, but he realized he would never be able to have personal conversation with each and every one of them, even when he offered regular office hours.

The Solution

ECoach is a personalized coaching tool that helps bridge the gap between students and instructors in large courses.

The ECoach web-app provides personalized and timely guidance and feedback to students on how to succeed in a course. The content is informed by behavioral science techniques such as motivational interviewing and is personalized based on data from multiple sources, including university databases and input submitted by students themselves in surveys within ECoach.

The tool helps learners navigate big (and sometimes overwhelming) courses by providing tailored communication, insights into their progress, and ways to approach common obstacles.

The Learning Impact Outcomes

Multiple research studies (2014, 2018, 2021) that control for confounding variables have shown that students who use ECoach earn higher grades (up to a third of a letter grade, on average) than students who don't, and that students who use ECoach more earn higher grades than those who use it less. ECoach has also been designed to support large-scale educational research. Two key interventions implemented in ECoach, an exam prep tool and an assessment reflection prompt, have been shown to help students increase their grades and have been integrated into the platform's core functionality.

The Return on Investment

ECoach has leveraged investment from the University of Michigan Third Century Initiative, EDUCAUSE Next Generation Learning Challenges Grant, and the National Science Foundation to become a foundational student support and research tool. ECoach is a technological cornerstone of the University of Michigan's investment in foundational courses, supporting more than 60% of all U-M undergraduate students in their largest and most difficult courses, while providing a research and data analytics framework for course experimentation, evaluation, and iteration. It has benefitted tens of thousands of students with the potential to impact hundreds of thousands more as usage expands.

The value of ECoach has been realized beyond U-M via a research and practice consortium which has deployed ECoach at University of California Santa Barbara, University of Minnesota, University of Pittsburgh, Penn State University, and the National University of Singapore. ECoach has also extended beyond the classroom as it is actively used across a growing range of priorities from coaching PhD candidates on dissertation writing to work by the Michigan College Advising Corps to guide pre-college learners in their college preparation and selection.