BOOST at Indiana University

Challenge

Today's college students are expected to complete more assignments than ever before. On average, Indiana University students submit at least 5 graded assignments within our online learning management system (LMS) each week — and that's not including in-class exams, presentations, or group projects. On one hand, this is a good thing: more assignments means more active learning, more transparency about learning goals, and more opportunities for students to receive feedback. But on the other hand, the increasing volume of online assignments also creates more material and deadlines for students to manage, and more opportunities for students to fall behind. Given that submitting timely assignments is the #1 predictor of student engagement and success, there is an outstanding need for automated support mechanisms to facilitate student engagement with online coursework at scale.

Boost is a mobile app that integrates with the LMS, providing reminders, resources, and encouragement — improving student behavior and success

At Indiana University, Boost provides a set of key features aimed at improving learner engagement in a highly personalized way. Principal among these, Boost reminds students when they haven't submitted anything for an imminent deadline, proactively intervening before a student misses an assignment. Boost is also configurable to send additional assignment reminders in a daily digest, which the student can customize on a course-by-course basis, setting up a personalized feed to help them stay on top of upcoming schoolwork. But facilitating learner engagement means more than reminding students of proximal deadlines — Boost also sends periodic personalized encouragement, immediately after students submit their work on time, providing positive reinforcement directly linked to students' learning activities. But more broadly, Boost fills an important gap in the default LMS toolkit, providing real-time automated services that support student engagement, personalized to the needs of individual students.

Learning Impact Outcomes

In our first limited release of Boost, results from a controlled experiment revealed that personalized proactive nudges improved adherence to assignments by 3.6% above instructors' announcements. Our subsequent expanded pilot ballooned dramatically: Roughly 500 instructors volunteered for Boost to be included in 750 courses, and there are 2,000 students actively using the app. Informal feedback within the app provides uniformly high praise for automated notifications about upcoming deadlines and for encouraging feedback confirming recent assignment submissions. By delivering the right message at the right time, Boost is actively supporting student engagement at scale.

Return on Investment

Growing stores of student data in contemporary LMSs offer great potential for predictive learning analytics, particularly for identifying behavioral patterns that are associated with future academic risk. But successfully predicting that a student will miss an assignment is an idle goal unto itself, and Boost provides a smart system for "closing the loop" — intervening in the learning process so that the risk is mitigated. Mobile apps represent a promising platform for deploying these kinds of automated, data-driven interventions at scale, empowering students to stay engaged in their coursework through constructive intelligent messaging and support.