

CourseSmart Analytics: Using Data to Transform Teaching, Learning and Institutional Accountability

The Challenge

Educators have historically relied upon data such as attendance and class participation to identify at-risk students who may be struggling. While observation and personal interaction with students are important aspects of ensuring learning outcomes, there has been great demand in the higher education community for data which measures student engagement with digital course materials as a means to facilitate student success.

The Solution

CourseSmart Analytics was developed specifically to address some of the most compelling challenges in higher education: **improving retention, controlling costs, and improving learning outcomes**. CourseSmart Analytics assesses a variety of usage statistics including session length, pages viewed, and activities such as highlighting or taking notes, to provide meaningful metrics of student engagement with course materials. A key pillar of the analytics solution is the **CourseSmart Engagement Index**, an algorithm devised from a combination of third-party research and CourseSmart's own proprietary formula, developed to more meaningfully measure engagement with course materials. All of the usage statistics, along with the CourseSmart Engagement Index, are packaged into a user-friendly dashboard. CourseSmart Analytics will benefit a range of stakeholders:

Faculty: will be able to view aggregate and individual student engagement data, correlate that data to overall student performance, and use it as a means to intervene with "at risk" students to help them stay on track in their studies so they can graduate on time and on-budget.

Provosts, deans, and course designers: will be able to use CourseSmart Analytics to assess the performance of adopted digital titles, and ensure they are being used effectively and for optimum ROI.

Publishers: will use CourseSmart Analytics to assess the relative impact of various digital course materials so they can continuously update and improve their products.

CourseSmart Analytics was developed utilizing the rich set of LTI based data, which is available through the integration of our core product directly into an institution's learning management system or online portal. As such, students, faculty and administration are able to capitalize on both the eTextbook and analytics dashboards services within their existing institutional workflow. CourseSmart invested significant time and resources to develop the data provisioning processes and multiple reporting dashboards on top of the GoodData BI platform. All of this is delivered seamlessly to institutions, saving them time, money and manpower within their IT departments.

A beta pilot for CourseSmart Analytics was announced last November, comprising six institutions who are participating for the Spring 2013 term: Ashworth College; Algonquin College; Career Point College; Central Carolina Technical College; Rasmussen College; and Texas A&M University-San Antonio. Cumulatively, the beta includes 76 faculty members, 26 administrators, and more than 3,700 students. CourseSmart worked with all participating schools to develop faculty recruiting guidelines, provide faculty training, and to inform students of the TrustE-certified privacy policy, which includes an opt-out choice for students who do not want to participate.

Learning Impact Outcomes/ROI

The beta pilot is still underway, however, CourseSmart will measure learning impact and success of the program through benchmark survey data. We conducted pre-beta pilot surveys among student, faculty and administrators, to gauge their perceptions and set criteria for success. The pre-beta survey results reflect enthusiasm and positive expectations for the product:

Students: 75% of students agree/strongly agree that they are comfortable with CourseSmart Analytics. 70% of students believe CourseSmart Analytics will help improve engagement and student success.

Faculty: 83% of faculty agree/strongly agree that CourseSmart Analytics will help them make more informed decisions about course materials.

Administrators: 100% of administrators agree or strongly agree that CourseSmart Analytics will inform digital textbook platform use. As the beta evolves, we expect CourseSmart Analytics will perform against the intended pain points of retention, cost control and improving learning outcomes as follows:

Improving retention and graduation rates: The CourseSmart Engagement Index was specifically designed to improve retention and graduation rates. Early intervention by the instructor is expected to reduce the chances that the student falls behind in class. Further, the instructor will use the data to compare grades against the Engagement Index to better focus students and adjust teaching approaches to improve performance and support the path to graduation.

Achieving significant cost savings: CourseSmart Analytics supports institutions' cost savings goals. For example, data will show which books are actually being used in a class and which books students are most engaged with so that faculty and institutions can make more informed decisions about course material selection.

Improving learning outcomes: According to an EDUCAUSE study from California State University entitled "Analytics in Progress: Technology Use, Student Characteristics and Student Achievement," there is a direct positive relationship between LMS usage and students' final grades. The more activity and/or time students spent on the LMS, the higher their final grade. Although results of our analytics beta pilot have yet to be determined, it is reasonable to expect engagement with digital course materials should follow the same rubric.