

# EXPLORING THE USE OF LEARNING ANALYTICS TO PROVIDE EFFECTIVE PERSONALIZED FEEDBACK AT SCALE

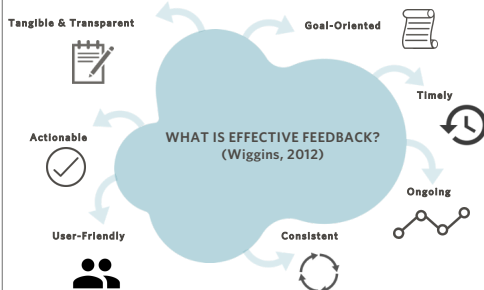
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## What are learning analytics tools?

Learning analytics empower “educators to collect, collate, analyze, and use student engagement and success data that they consider meaningful for their particular contexts [and] enables personalization and targeting of student learning and support ..., fostering positive student-teacher relationships and enhancing student engagement” (Vigentini et al., 2017, p. 422). Research shows a positive impact of learning analytic tools on student motivation, participation, and academic achievement (Pardo et al, 2019; Vigentini et al., 2017).

## What is OnTask?

This project piloted a learning analytics tool called OnTask. Instructors access readily available data from the university’s learning management system to pull information (e.g., assessment results, participation data, assignment completion, etc.) and create messages that target specific learning needs. OnTask was used to send messages that corrected misunderstandings about the course content, updated students about their progress, and directed students to additional resources that complemented the course.



Wiggins, G. (2012). Seven keys to effective feedback. *Educational Leadership*, 70(1), 10-16.

## Goals of the Project

This project examines the use of learning analytics to enhance students’ motivation, learning, and participation. As class sizes in higher education institutions continue to increase, instructors may experience difficulties delivering effective personalized feedback to students. This project highlights how learning analytics tools contributed to students’ academic work.

## Methodology

Instructors from Sociology, Soil Science, and Asian Studies were invited to pilot OnTask with their students during the Summer 2020 term (late-May to August). The courses were taught online because of COVID-19. Undergraduate students were sent pre- and post-course surveys by the instructors to gather their perspectives of effective feedback, including the modality, the method of delivery, and timeliness. The survey data was analyzed using Qualtrics and SPSS while open-ended responses underwent a thematic analysis.

## Findings



Students expressed positive experiences with OnTask



Students felt instructors were invested in their learning



Students said they were more motivated to participate in the course



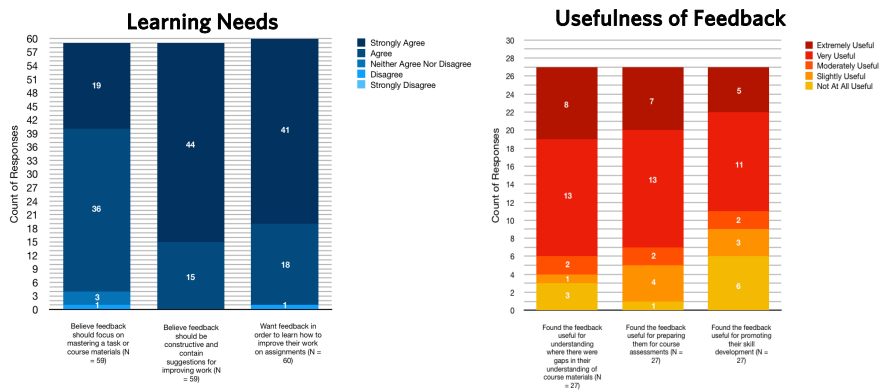
Students felt they were engaged in knowledge creation and sharing



Students said OnTask promoted further exploration of course content

**Student-Instructor Relationship & Motivation**

A positive relationship between feeling like the professor cared about student learning and finding that the messages helped students stay motivated in their learning was found,  $r(43) = .58$ ,  $p < 0.001$ .



The figure on the left highlights students' pre-course opinions on what qualities of feedback met their learning needs and why they wanted to receive feedback. The figure on the right shows that students agreed OnTask was useful for purposes that were relevant to their learning goals. In the post-course survey, 85% of students indicated they used the feedback provided in the messages for their learning in the course.