

Improving Student Engagement – Anonymous Digital Polling in Higher Education Classrooms

Sub-theme: Engaging Students

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Introduction

In the beginning of Summer 2023, CETL secured funding to pilot a new digital polling software to use in classrooms. We selected the digital polling tool Mentimeter to investigate if this type of polling could increase active learning in the classroom and improve student engagement and academic belongingness at a large public university with an urban access mission and R1 status. Prior polling research in higher education has largely been limited to basic polling approaches, such as physical cards or clickers that students must buy (Mayhew et al., 2020). Mentimeter offers newer question features, data visualizations, and completely anonymized active learning with no added cost to students.

Pilot Program Recruitment and Training

We meticulously recruited instructors for the Mentimeter Pilot Program through outreach to each school or college on campus to have a representative sample of pilot instructors from many departments and programs on campus. With 30 licenses available, we recruited instructors teaching at every level ranging from undergraduate to graduate and across all modalities, face-to-face, online, and hybrid. Further, we ensured that we had representatives from large introductory lecture classes and instructors who had previously used different polling solutions in their class (e.g. TurningTechnologies Clickers, Kahoot!, and PollEverywhere).

Once the pilot participants were finalized, we conducted multiple training sessions with Mentimeter representatives to the participants in the Summer of 2023 before the Fall semester began. We also enabled the Microsoft PowerPoint add-in for Mentimeter to allow our instructors to integrate Mentimeter polling slides directly into their existing lecture materials.

Student Survey Data

Nearly 2,000 students participated in the pre-survey we distributed to instructors using Mentimeter over the Fall 23 and Spring 24 semesters. In that same period, over 400 students completed the post survey that followed the close of each semester.

Our data aligned similarly to the study Mayhew and colleagues (2020) conducted. Our most compelling student data related to engagement and concept mastery, belongingness, and instructor presence.

N = 410	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
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Mentimeter polling helps me learn concepts better	3%	4%	23%	41%	29%
Mentimeter polling makes learning more engaging	3%	3%	12%	36%	46%
Mentimeter polling makes learning more fun	3%	4%	18%	35%	40%
The use of Mentimeter makes me feel more connected to my classmates	6%	9%	31%	32%	22%
When my instructor uses Mentimeter polling, I feel like they care about my learning	3%	3%	29%	36%	29%
I like how Mentimeter allows me to see answers from my peers	4%	3%	20%	36%	37%
Mentimeter polling is annoying or distracting	38%	26%	19%	6%	11%

Summary and Future Use

This mix of quantitative and qualitative data demonstrated that students felt more engaged with their learning and more connected to their peers and instructors. Further, the anonymity of the tool allowed for more participation in the learning process from different types of learners, especially those who have anxiety or a fear of being wrong in front of their peers in large courses. Lastly, students felt that Mentimeter presented questions and data in a way that was more inclusive for multiple types of learners (Mayhew et al., 2020), but particularly for visual learners in our study.

For the 2024-25 academic year, we are doubling our pilot to 60 licenses and expanding our study. Our hope is to reach departments that missed out on the initial pilot and to bring active learning, through digital polling, to more large lecture format courses to improve student success.

References

Mayhew, E., Davies, M., Millmore, A., Thompson, L., & Pena, A. (2020) The impact of audience response platform Mentimeter on the student and staff learning experience. *Research In Learning Technology*, 28. <https://doi.org/10.25304/rlt.v28.2397>