Changes in Course Delivery: The Effect of a Significant Disruption on Instructors’ LMS Feature Use

James Cover¹, Grace Panther², & Heidi Diefes-Dux¹
¹Biological Systems Engineering, ²Civil and Environmental Engineering: University of Nebraska - Lincoln

Key Findings
- LMS feature use was found to be the greatest during the height of the disruption in Fall 2020
- A drop in LMS feature use occurred during Spring 2021

Background
- Significant and sudden disruptions can bring normal university classroom activity to a halt and have many effects on how instructors teach going forward
- Disruptions cause instructors to utilize a wide array of teaching practices and strategies
- Most research about Learning Management System (LMS) use during the COVID time period is focused on student learning¹,²,³

Research Question
How do engineering instructors’ Learning Management System (LMS) use change before, during, and after a sudden disruption to higher education?

Methods
- Setting: Midwest Research Intensive (R1) University, College of Engineering
- LMS feature use data
  - Spring 2019 - Fall 2022
- Descriptive statistics used to summarize frequency of LMS feature use

Results

Fall 2019 2020 2021
Student Activity
Assignment Groups
Assignments
Peer Reviews
Submissions

Fall 2019 2020 2021
Files
Instructor Files
Student Files
TA Files

Spring 2020 2021

Conclusion
- The LMS feature use can provide insight into instructors’ teaching practices and strategies and the extent to which instructors sustain change after a disruption
- It is anticipated that LMS data use is applicable for understanding the practices enacted by instructors in other STEM disciplines
- Results can contribute to the design of new professional development strategies to mitigate the impact of disruptions.

References

Acknowledgement
This work was made possible by a grant from the National Science Foundation (NSF EEC 2105156). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation.