

# Delivering Pre-Class Activities Online to Impact Student Learning<sup>a</sup>

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## Introduction

- Successful in-class active learning depends heavily on student preparation.
- **Question:** If students complete pre-class prep activities online rather than on paper, how will direct and indirect measures of their learning be affected?

## Methods

- Three sections of Calculus I submitted pre-class prep activities on paper and two sections submitted pre-class prep activities via WeB-Work.
- We compared student responses to four items on the IDEA SRI<sup>d</sup>.
- All sections were taught by the same instructor.

## Conclusion

- Students in the treatment demonstrated a statistically significant increase in student responses to the statement “The instructor provided meaningful feedback on students’ academic performance”.
- Students in the treatment demonstrated a statistically significant decrease in student perceptions of the “amount of coursework” (compared to other courses)

The relatively small, homogeneous populations of our calculus classes means that more work needs to be done.



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Calculus students who complete pre-class activities to support active learning online, instead of on paper, report receiving more meaningful feedback from their instructor and a perceived reduction in workload.



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