



## Three good reasons, and three bad reasons, to embrace active learning

Robert Talbert, Ph.D.

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### Contact

- Robert Talbert, Ph.D., Professor of Mathematics and Presidential Fellow for the Advancement of Learning, Grand Valley State University
- [talbertr@gvsu.edu](mailto:talbertr@gvsu.edu) / [LinkedIn profile](#)
- Blogs: [rtalbert.org](http://rtalbert.org) / [gradingforgrowth.com](http://gradingforgrowth.com) / [intentionalacademia.substack.com](http://intentionalacademia.substack.com)
- Books:
  - [Flipped Learning: A Guide for Higher Education Faculty](#)
  - [Grading for Growth: A Guide to Alternative Grading Practices that Promote Authentic Learning and Student Engagement in Higher Education](#) (with David Clark; preorder now, available July 2023)

### Materials

- Slides from the talk:  Talbert YSU talk
- [University of Michigan Active Learning resources](#)

### Research (in order of appearance in the talk)

Note: Some papers may require institutional login or subscriptions.

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- Hake, R. R. (1998). Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses. *American journal of Physics*, 66(1), 64-74. <https://files.eric.ed.gov/fulltext/ED441679.pdf>
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- Stains, M., Harshman, J., Barker, M. K., Chasteen, S. V., Cole, R., DeChenne-Peters, S. E., ... & Young, A. M. (2018). Anatomy of STEM teaching in North American universities. *Science*, 359(6383), 1468-1470. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6310123/>
- Deslauriers, L., McCarty, L. S., Miller, K., Callaghan, K., & Kestin, G. (2019). Measuring actual learning versus feeling of learning in response to being actively engaged in the classroom. *Proceedings of the National Academy of Sciences*, 116(39), 19251-19257. <https://www.pnas.org/doi/full/10.1073/pnas.1821936116>