Systematic reviews

Areas of research and related projects

Measuring the Relative Effectiveness of Instructional Models across the Student-Centered – Teacher-Centered Continuum of Educational Practices (Selected related publication):

Bernard, R. M., Borokhovski, E., Schmid, R. F., Waddington, D. I., & Pickup, D. (2019). Adaptive teaching and individualization for k-12 students improves academic achievement: A meta-analysis of classroom studies, *Campbell Systematic Reviews*. 15:e1017. https://doi.org/10.1002/c12.1017



Campbell Systematic Reviews (2019): Plain Language Summary

Bernard, R. M., Borokhovski, E., Tamim, R. M., & Abrami, P.C. (2013, April). *Teacher-centered and Student-centered pedagogy: A meta-analysis of classroom practices and processes.* Poster presented at the 2013 meeting of the American Educational Research Association, San Francisco, CA.

Developing Methodology and Assessing Quality of Meta-Analytical Research (Selected related publications):

Bernard, R. M. & Borokhovski, E. F. (2015). Detecting and preventing bias in meta-analysis: What could you learn by systematically conducting systematic reviews? *Psychology-Economics-Law* (1), 6-28. [Бернард Р.М. & Бороховский Е.Ф. (2015). Возможные искажения в мета-аналитических исследованиях. *Психология*. *Экономика*. *Право*. (1), 6-28.]

Bernard, R. M., Borokhovski, E., Schmid, R. F., & Tamim, R. M. (2014). An exploration of bias in meta-analysis: The case of technology integration research in higher education.

- *Journal of Computing in Higher Education. 26*(3), 183-209. http://dx.doi.org/10.1007/s12528-014-9084-z.
- Bernard, R. M., Borokhovski, E., & Tamim, R. M. (2014). Big pictures we can rely on: Detecting bias in meta-analyses of distance education research. *Distance Education*, 35(3), 271-293. http://dx.doi.org/10.1080/01587919.2015.957433
- Bernard, R. M. (2014). Things I have learned about meta-analysis since 1990: Reducing bias in search of "The Big Picture." *Canadian Journal of Learning and Technology*, 40(3). http://www.cjlt.ca/index.php/cjlt/issue/current

How Education Can Promote Critical Thinking Skills and Affect Critical Thinking Dispositions (Selected related publications):

- Abrami, P. C., Bernard, R. M., Borokhovski, E., Waddington, D., Wade, C. A., & Persson, T. (2015). Strategies for teaching students to think critically: A meta-analysis. *Review of Educational Research*. 85(2), 275-314. http://dx.doi.org/10.3102/0034654314551063
- Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M. A., Tamim, R., & Zhang, D. A. (2008). Instructional interventions affecting critical thinking skills and dispositions: A stage one meta-analysis. *Review of Educational Research*, 78(4), 1102-1134. http://dx.doi.org/10.3102/0034654308326084
- Bernard, R.M., Zhang, D., Abrami, P.C., Sicoly, F., Borokhovski, E., & Surkes, M. (2008). Exploring the structure of the Watson-Glaser Critical Thinking Appraisal: One scale or many subscales? *Thinking Skills and Creativity*, 3 (1), 15-22. http://dx.doi.org/10.1016/j.tsc.2007.11.001

What Works in Distance Education (Selected related publications):

- Bernard, R. M., Borokhovski, E., & Tamim, R. M. (2019). The state of research on distance, online, and blended learning from the perspectives of meta-analyses and qualitative systematic reviews. In M. G. Moore & W. C. Diehl (Eds.). *Distance Education Research Handbook* (4th Ed., pp. 92-104). New York, NY: Routledge.
- Borokhovski, E., Tamim, R. M., Bernard, R. M., Abrami, P. C., & Sokolovskaya, A. (2012). Are contextual and design student-student interaction treatments equally effective in distance education? A follow-up meta-analysis of comparative empirical studies. *Distance Education*, *33*(3), 311-329. http://dx.doi.org/10.1080/01587919.2012.723162
- Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, A., Tamim, R., Surkes, M., & Bethel, E. C. (2009). A meta-analysis of three interaction treatments in distance education. *Review of Educational Research*, 79(3) 1243-1289. http://dx.doi.org/10.3102/0034654309333844
- Bernard, R. M., Abrami, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Wallet, P. A., Fiset, M., & Huang, B. (2004). How does distance education compare to classroom

instruction? A Meta-analysis of the empirical literature. *Review of Educational Research*, 74(3), 379-439. http://dx.doi.org/10.3102/00346543074003379

Technology Integration in Education: Promises and Prospects (*Selected related publications*):

- Bernard, R. M., Borokhovski, E., Schmid, R. F. & Tamim, R. M. (2018). Gauging the effectiveness of technology in education: What the best-quality meta-analyses tell us. In: *Learning, Design, and Technology. An International Compendium of Theory, Research, Practice, and Policy.* J. M. Spector, B. B. Lockee, & M. D. Childress (Eds.). Heidelberg, DE: Springer.
- Borokhovski, E., Bernard, R.M., Tamim, R.M., & Schmid, R.F. (2016). Technology Integration in postsecondary education: A summary of findings from a set of related meta-analyses. *Russian Psychological Journal*, *13*(4), 284-302.
- Tamim, R. M., Borokhovski, E., Pickup, D., Bernard, R. M., & El Saadi, L. (2015). *Tablets for teaching and learning: A systematic review and meta-analysis.* Commonwealth of Learning: http://oasis.col.org/bitstream/handle/11599/1012/2015_Tamim-et-al_Tablets-for-Teaching-and-Learning.pdf?sequence=1&isAllowed=y
- Borokhovski, E., Bernard, R. M., Tamim, R. M., & Schmid, R. S., & Sokolovskaya, A. (2016). Technology supported student interaction in higher education: A meta-analysis of designed versus contextual treatments. *Computers & Education, 96,* 15-28. .http://dx.doi.org/10.1016/j.compedu.2015.11.004.
- Schmid, R. F., Bernard, R. M., Borokhovski, E., Tamim, R., Abrami, P. C., Wade, A., & Woods, J. (2014). The effects of technology use in postsecondary education: A meta-analysis of classroom applications. *Computers & Education*, 72(2014), 271-291. http://dx.doi.org/10.1016/j.compedu.2013.11.002
- Bernard, R. M., Borokhovski, E., Schmid, R. F., Tamim, R. M. & Abrami, P. C. (2014). A meta-analysis of blended learning and technology use in higher education: From the general to the applied. *Journal of Computing in Higher Education*. *26*(1), 87-122. .http://dx.doi.org/10.1007/s12528-013-9077-3
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State of eLearning in Canada: Policies and Practice (Selected related publications):

Borokhovski, E., Bernard, R. M., Mills, E., Abrami, P. C., Wade, C. A., Pickup, D., Bethel, E. C., Lowrison, G., Tamim, R., & Surkes, M. A. (2011). An Extended Systematic Review of Canadian Policy Documents on e-Learning: What We're Doing and Not Doing. *Canadian*

- Journal of Learning and Technology (CJLT), 37(3), 1-30: http://www.cjlt.ca/index.php/cjlt/article/view/589/324
- Abrami, P.C., Bernard, R.M., Wade, C.A., Borokhovski, E., Tamim, R., Surkes, M., & Zhang, D. (2006). A Review of e-Learning in Canada: Rejoinder to Commentaries. *Canadian Journal of Learning and Technology* 32(3),119-139.
- Abrami, P.C., Bernard, R.M., Wade, C.A., Schmid, R.F., Borokhovski, E., Tamim, R., Surkes, M., Lowerison, G., Zhang, D., Nicolaidou, I., Newman, S., Wozney, L., & Peretiatkowicz, A. (2006). A review of e-learning in Canada: A rough sketch of the evidence, gaps and promising directions. *Canadian Journal of Learning and Technology*. *32*(3), 1-78.