

## 21st Century Teaching and Learning

## Deeper Learning Research:

Achilles, C. M., Hoover, S. P. (1996). Exploring problem-based learning (PBL) in grades 6-12. Paper presented at the Annual Meeting of the Mid-South Educational Research Association, Tuscaloosa, AL. (ED 406 406).

Ames, C. (1984). Competitive, cooperative, and individualistic goal structures: A cognitive motivation analysis. In R. Ames & C. Ames (Eds.). Research in motivation in education: Student motivation (pp. 177-207). New York: Academic Press.

Barron, B. (2003). When smart groups fail. The Journal of the Learning Sciences, 12(3), 307-359

Cognition and Technology Group at Vanderbilt (1992). The Jasper series as an example of anchored instruction: Theory, program description and assessment data (PDF). Educational Psychologist, 27(3): 291-315

Dewey, J., & Small, A. W. (1897). My pedagogic creed (No. 25). EL Kellogg & Company.

Dewey, J. (1938). Education and experience. New York: Macmillan. Cited in Knoll, 1977, Op Cit.

Dewey, J., & Small, A. W. (1897). My pedagogic creed (No. 25). EL Kellogg & Company.

Drake, K. N. & Long, D. (2009). Rebecca's in the dark: A comparative study of problem-based learning and direct instruction/experiential learning in two fourth-grade classrooms (Abstract). Journal of Elementary Science Education, 21(1), p 1-16.

Dweck, C. (2000). Self-Theories: Their role in motivation, personality and development. Essays in social psychology. Psychology Press/Taylor & Francis Group.

Ertmer, P. A., & Simons, K. D. (2005). Scaffolding teachers' efforts to implement problem-based learning (PDF). International Journal of Learning, 12(4), 319-328.

Finkelstein, N., Hanson, T., Huang, C. W., Hirschman, B., & Huang, M. (2010). Effects of problem-based economics on high school economics instruction (PDF) (NCEE 2010-4110). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory West.

Gallagher, S. A., & Stepien, W. J. (1996). Content acquisition in problem-based learning: Depth versus breadth in American studies (Abstract). Journal for the Education of the Gifted, 19(3), 257-275.

Gordon, P.R., Rogers, A.M., Comfort, M., Gavula, N., & McGee, B.P. (2001). A taste of problem-based learning increase achievement of urban minority middle-school students (Abstract). Educational Horizons, 79(4), 171-175.

## Deeper Learning Research

Hattie, J. (2008). Visible Learning: A synthesis of over 800 meta-analyses relating to achievement. New York, NY: Routledge.

Halvorsen, A., Duke, N. K., Brugar, K. A., Block, M. K., Strachan, S. L., Berka, M. B., & Brown, J. M. (revised 2014). Narrowing the achievement gap in second-grade social studies and content area literacy: The promise of a project-based approach (PDF). Theory and Research in Social Education, 40, 198-229.

Hernandez-Ramos, P., & De La Paz, S. (2009). Learning history in middle school by designing multimedia in a project-based learning experience (Abstract). Journal of Research on Technology in Education, 42(2), 151-173.

Hung, W. (2008). The 9-step problem design process for problem-based learning: Application of the 3C3R model. Educational Research Review, 4(2) 118-141.

Johnson, D.W., & Johnson, R. T., 2009. An educational psychology success story: Social interdependence theory and cooperative learning (Abstract). Educational Researcher, 38(5), 365-379.

Johnson, D. W., Johnson, R. T., & Stanne, M. E. (2000). Cooperative learning methods: A meta-analysis (PDF). Minneapolis, MN: University of Minnesota Press.

Kolodner, J. L., Camp, P. J., Crismond, D., Fasse, B., Gray, J., Holbrook, J., Puntambekar, S., & Ryan, M. (2003). Problem-based learning meets case-based reasoning in the middle-school science classroom: Putting Learning by Design into practice (PDF). Journal of the Learning Sciences, 12(4), 495-547.

Lee, O., Buxton, C., Lewis, S., & LeRoy, K. (2006). Science inquiry and student diversity: Enhanced abilities and continuing difficulties after an instructional intervention (Abstract). Journal of Research in Science Teaching 43(7): 607-636.

Liu, M., Hsieh, P., Cho, Y. J., & Schallert, D. L. (2006). Middle school students' self-efficacy, attitudes, and achievement in a problem-based learning environment (PDF). Journal of Interactive Learning Research. 17(3). 225-242.

Lou, Y., Abrami, P.C., Spence, J. C., Poulsen, C., Chambers, B., & d'Apollonia, S. (1996). Within-class grouping: A meta-analysis (Abstract). Review of Educational Research, 66(4), 423-458.

Maxwell, N., Mergendoller, J. R., & Bellisimo, Y. (2005). Problem-based learning and high school macroeconomics: A comparative study of instructional methods. The Journal of Economic Education, 36(4), 315-331.

Mergendoller, J. R., Maxwell, N. L., & Bellisimo, Y. (2006). The effectiveness of problem-based instruction: A comparative study of instructional methods and student characteristics. Interdisciplinary Journal of Problem-based Learning, 1(2).

## Deeper Learning Research

National Clearinghouse for Comprehensive School Reform. (2004). Putting the pieces together: Lessons from comprehensive school reform research (PDF). Washington, DC.

Sage, S. M. (1996). A qualitative examination of problem-based learning at the K-8 level: Preliminary findings. Paper presented at the Annual Meeting of the American Educational Research Association, New York. (ED 398 263).

Savey, J. R. & Duffy, T. M. (1985). Problem based learning: An instructional model and its constructivist framework. Educational Technology, 35 (5), 31-38.

Savoie, J. M. & Hughes, A. S. (1994). Problem-based learning as a classroom solution. Educational Leadership, 52 (3) 54-57.

Schneider, R., Krajcik, J., Marx, R.W., & Soloway, E. (2002). Student learning in project-based science classrooms (Abstract). Journal of Research in Science Teaching. 39(5), 410-422.

Slavin, R. (1991). Synthesis of research of cooperative learning (PDF). Educational Leadership 48(5), 71-82.

Strobel, J., & van Barneveld, A. (2009). When is PBL more effective? A meta-synthesis of meta-analyses comparing PBL to conventional classrooms (Abstract). The Interdisciplinary Journal of Problem-Based Learning, 3(1).

Stepien, W. & Gallagher, S. (1993). Problem-based learning: As authentic as it gets. Educational Leadership, 51, 25-28.

Stepien, W. J., Gallagher, S. A., & Workman, D. (1993). Problem-based learning for traditional and interdisciplinary classrooms. Journal for the Education of the Gifted, 16, 338-357.

Terenzini, P. T., Cabrera, A. F., Colbeck, C. L., Parente, J. M., & Bjorkland, S. A. (2001). Collaborative learning vs. lecture/discussion: Students' reported learning gains (PDF). Journal of Engineering Education, 90(1), 123-130.

Thomas, J. W. (2000). A review of research on project-based learning (PDF).

Walker, A. & Leary, H. (2009). A problem-based learning meta-analysis: Differences across problem types, implementation types, disciplines, and assessment levels (Abstract). Interdisciplinary Journal of Problem-based Learning, 3(1): 12-43.

Wieseman, K. C., & Cadwell, D. (2005). Local history and problem-based learning (Abstract). Social Studies and the Young Learner, 18(1), 11-14.