

Short List of References on Misconceptions and/or Conceptual Change

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- Bransford, J.D., Brown, A.L. & Cocking, R.R. (1999). How People Learn: Brain, Mind, Experience, and School. Washington, D.C.: National Academy Press.
- Carey, S. (1999). Sources of conceptual change. In E.K. Scholnick, K. Nelson, & P. Miller (Eds.), Conceptual Development: Piaget's Legacy (pp. 293-326). Mahwah, NJ: Lawrence Erlbaum Assoc.
- Carey, S. & Smith, C. (1995). On understanding the nature of scientific knowledge. In D.N. Perkins (Ed.), Software goes to school: Teaching for understanding with new technologies (pp. 39-55). New York: Oxford University Press.
- diSessa, A. A., & Sherin, B. L. (1998). What changes in conceptual change? International Journal of Science Education, 20(10), 1155-1191.
- diSessa, A. (1988). Knowledge in Pieces. In G. Forman & P. Pufall (Eds.), Constructivism in the Computer Age (pp. 49-70). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hammer, D., Elby, A., Scherr, R., & Redish, E. (in press). Resources, framing, and transfer. In J. Mestre (Ed.), Transfer of learning from a modern multidisciplinary perspective. Greenwich, CT: Information Age Publishing.
- Hammer, D. (1996). "Misconceptions or p-prims: How may alternative perspectives of cognitive structure influence instructional perceptions and intentions?", Journal of the Learning Sciences 5, 97-127.
- Hestenes, D., Wells, M. & Swackhamer, G. (1992). Force concept inventory. The Physics Teacher, 30, (March), 159-166.
- Ioannides, C. & Vosniadou, C. (2002). The changing meanings of force. Cognitive Science Quarterly, 2, 5-62.
- Lightman, A.P., Miller, J.D. & Leadbeater, B.J. (1987). Contemporary cosmological beliefs. In J.D. Novak (Ed.), Proceedings of the Second International Seminar on Misconceptions and Educational Strategies in Science and Mathematics, Vol III (pp. 309-321). Ithaca, NY: Department of Education, Cornell University.
- Maloney, D.P., O'Kuma, T.L., Hieggelke, C.J., & Van Heuvelen, A. (2001). Surveying students' conceptual knowledge of electricity and magnetism. American Journal of Physics, Physics Education Research Supplement, 69(7), S12-S23.
- McClosley, M. Naïve theories of motion. In D. Gentner & A.L. Stevens (Eds.), Mental Models (pp. 299-324). Mahwah, NJ: Lawrence Erlbaum Assoc.
- McDermott, L.C. (1984). Research on conceptual understanding in mechanics. Physics Today, 37(7), 24-32.
- Mestre, J.P. (2002). Probing adults' conceptual understanding and transfer of learning via problem posing. Journal of Applied Developmental Psychology, 23, 9-50.
- Mestre, J., Thaden-Koch, T., Dufresne, R., & Gerace, W. (in press). The dependence of knowledge deployment on context among physics novices. In E. Redish, C. Tarsitani & M. Vicentini (Eds.), Proceedings of the international school of

- physics "Enrico Fermi"*(pp. 367-408). Amsterdam: ISO Press/Italian Physics Society.
- Minstrell, J. (1992). Facets of students' knowledge and relevant instruction. In R. Duit, F. Goldberg & H. Niedderer (Eds.), The Proceedings of the International Workshop on Research in Physics Education: Theoretical Issues and Empirical Studies (pp. 110-128) (Bremen, Germany, March 5-8, 1991). Kiel, Germany: IPN (Institut für die Pädagogik der Naturwissenschaften).
- Pfundt, H. and R. Duit, R. (1991). Bibliography: Students' Alternate Frameworks in Science Education, (3rd ed.). Keil, Germany: Institute for Science Education.
- Posner, G., Strike, K., Hewson, P. & Gerzog, W. (1982). Accommodation of a scientific conception: Toward a theory of conceptual change. Science Education, 66, 211-227.
- Smith, J., diSessa, A. & Roschelle, J. (1993-1994) "Misconceptions reconceived: A constructivist analysis of knowledge in transition", The Journal of the Learning Sciences 3, 115-163.
- Wandersee, J.H. (1983). Students' misconceptions about photosynthesis: A cross-age study. In H. Helm & J. Novak (Eds.), Proceedings of the International Seminar on Misconceptions in Science and Mathematics (441-465). Ithaca, NY: Department of Education, Cornell University.