

REFERENCE LIST

- Abd-El-Khalick, F. (2006). Preservice and experienced biology teachers' global and specific subject matter structures: implications for conceptions of pedagogical content knowledge. *Eurasia Journal of Mathematics, Science and Technology Education*, 2(1), 1-29.
- Abd-El-Khalick, F., & Akerson, V. (2007). On the role and use of "theory" in science education research: A response to Johnson, Sutherland and Sowell. *Science Education*, 91(1), 187-194.
- Abell, S. (2008). Twenty years later: Does pedagogical content knowledge remain a useful idea? *International Journal of Science Education*, 30(10), 1405-1416.
- Abimbola, I. (1988). The problem of terminology in the study of student's conceptions in science. *Science Education*, 72(2), 175-184.
- Aguillard, D. (1999). Evolution education in Louisiana public schools: A decade following Edward v Aguillard. *The American Biology Teacher*, 61(3), 182-188.
- Alles, D. (2001). Using evolution as the framework for teaching biology. *The American Biology Teacher*, 63(1), 20-23.
- Antolin, M., & Herbers, J. (2001). Perspective: evolution's struggle for existence in America's public schools. *Evolution. International Journal of Organic Evolution*, 55(12), 2379-2388.
- Asghar, A., Wiles, J., & Alters, B. (2007). Canadian pre-service elementary teachers' conceptions of biological evolution and evolution education. *McGill Journal of Education*, 42(2), 189-210.
- Bahar, M., Johnstone, A., & Hansell, M. (1999). Revisiting learning difficulties in biology. *Journal of Biological Education*, 33(2), 84-86.
- Baker, T. (1994). *Doing social research* (2nd ed). New York. McGraw-Hill.
- Bednarz, D. (1985). Quantity and quality in evaluation research: a divergent view. *Evaluation and Program Planning*, 8, 289-306.
- Bell, J. (1987). *Doing your research project: a guide for first-time researchers in education and social science*. (2nd ed.). Open University Press: Milton Keynes.
- Berry, A., Loughran, J., & van Driel, J. (2008). Revisiting the roots of pedagogical content knowledge. *International Journal of Science Education*, 30(10), 1271-1279.
- Berdie, D., & Anderson, J. (1974). *Questionnaires: design and use*. Metuchen, new jersey: The Scarecrow Press, Inc.
- Besterman, H., & Baggott la Velle, L. (2007). Using human evolution to teach evolutionary theory. *Journal of Biological Education*, 41(2), 76-81.
- Bizzo, N. (1994). From down house landlord to Brazilian high school students: what has happened to evolutionary knowledge on the way? *Journal of Research in Science Teaching*, 31, 537-556.
- Bishop, B., & Anderson, C. (1990). Student's conception of natural selection and its role in evolution. *Journal of Research in Science Teaching*, 27(5), 415-427

- BouJaoude, S., Wiles, J., Asghar, A., & Alters, B. (2011). Muslim, Egyptian and Lebanese students' conceptions of biological evolution. *Sci & Educ*, 20, 895-915.
- Brem, S., Renny, M., & Schindel, J. (2003). Perceived consequences of evolution: College students perceive negative personal and social impact in evolutionary theory. *Science Education*, 87, 181-206.
- Brumby, M. (1984). Misconceptions about the concept of natural selection by medical biology students. *Science Education*, 68(4), 493-503.
- Bull, J., & Wichman, H. (2001). Applied evolution. *Annual Review of Ecology and Systematics*, 32(2), 183-217.
- Caliendo, S., & Kyle, W. (1996). Establishing the theoretical frame. *Journal of Research in Science Teaching*, 33(3), 225-227.
- Campbell, N., Reece, J., Urry, L., Cain, M., Wasserman, S.A., Minorsky, P., & Jackson, R. (2008). *Biology* (8th ed.). San Francisco: Pearson Benjamin Cummings.
- Carlsen, W. (1999). Domains of teacher knowledge. In J. Gess-Newsome & N. Lederman (Eds.), *Examining Pedagogical Content Knowledge: the construct and its implications for science education*. Dordrecht: Kluwer Academic Publishers. pp 133-144.
- Cavallo, A., & McCall, D. (2008). Seeing may not mean believing: examining students' understanding and beliefs in evolution. *The American Biology Teacher*, 70(9), 522-530.
- Clores, M., & Limjap, A. (2006). Diversity of students' beliefs about biological evolution. *Asia Pacific Journal of Education*, 26(1), 65-77.
- Clough, M. P. (1994). Diminishing students' resistance to biological evolution. *The American Biology Teacher*, 56(7), 409-414.
- Cochran, K., DeRuiter, J., & King, R. (1993). Pedagogical content knowing: an integrative model for teacher preparation. *Journal of Teacher Education*, 44 (4), 263-272.
- Cohen, L., & Manion, L. (1986). *Research methods in education* (2nd ed.). London and New York: Routledge.
- Cohen, L., & Manion, L. (1994). *Research methods in education* (4th ed.). London and New York: Routledge.
- Collins English Dictionary: Major new edition (1999). (3rded.). Aylesburg, England: Market House Books Ltd.
- Collopy, R. (2003). Curriculum materials as a professional tool: how a mathematics textbook affected two teachers' learning. *The Elementary School Journal*, 103(3), 287-311.
- Dagher, Z., & BouJaoude, S. (1997). Scientific views and religious beliefs of college students: the case of biological evolution. *Journal of Research in Science Teaching*, 34, 429-455.
- Dawkins, R. (2008). Why Darwin matters. *The Guardian*, 9 Feb 2008. <http://www.guardian.co.uk/science/2008/feb/09/darwin.dawkins1/print>. Accessed 17 July 2009.

- Dempster, E., & Hugo, W. (2006). Introducing the concept of evolution in South African schools. *South African Journal of Science*, 102(3/4), 106-112.
- Denzin, K., & Lincoln, Y. (2000). The discipline and practice of qualitative research. In K. Denzin and Y. Lincoln (Eds.). *Handbook of qualitative research* (2nd ed.). Thousand Oaks. California: Sage.
- Department of Education. (2003). National curriculum statement Grades 10-12 (General). Pretoria: Department of Education.
- Department of Education. (2007). National curriculum statement Grades 10-12 (General). Content framework for *Life Sciences*. Circular 67/2007. Pretoria: Department of Education.
- Department of Education. (2008a). *Life Sciences examination guidelines, Grade 12 2008*. <http://www.education.gov.za/Curriculum/Examination%20Guidelines%20Grade2012%20NCS%202008/LifeSciences%20Sciences>. Accessed 6 June 2008.
- Department of Education. (2008b). Learning programme guidelines: *Life Sciences*. Pretoria: Department of Education.
- Dobzhansky, T. (1973). Nothing in biology makes sense except in the light of evolution. *The American Biology Teacher*, 35(3), 125-129.
- Dodge, B. (1996). *Teaching for active learning*. <http://edweb.sdsu.edu/people/bdodge/active/activelearning.html>. Accessed 07 August 2011
- Education Labour Relations Council (2003). *Policy Handbook for Educators*. Bruton, C. & Partners (Eds.). Universal Print group.
- Farber, P. (2003). Teaching and the nature of science. *The American Biology Teacher*, 65(5), 347-354.
- Feiman-Nemser, S., & Parker, M. B. (1990). Making subject matter part of the conversation in learning to teach. *Journal of Teacher Education*, 41(3), 32-43.
- Foster, C. (2012). Creationism as a misconception: socio-cognitive conflict in the teaching of evolution. *International Journal of Science Education*, 34(14), 2117-2180.
- Fisher, K., & Lipson, J. (1986). Twenty questions about student errors. *Journal of Research in Science Teaching*, 23(9), 783-803.
- Fraenkel, J., & Wallen, N. (1990). *How to design and evaluate research in education*. New York: McGraw-Hill Publishing Company.
- Freeman, S., & Herron, J. (2004). *Evolutionary analysis* (3rd ed). United States of America: Pearson Prentice Hall.
- Freeman, S., & Herron, J. (2007). *Evolutionary analysis* (4th ed). United States of America: Pearson Prentice Hall.
- Futuyma, D. (2009). *Evolution* (2nd ed). Sunderland, Massachusetts United States of America: Sinauer Associates, Inc. Publishers

- Galfo, A.J. (1975). *Interpreting educational research* (3rd ed.). United States of America: W. Brown Company Publishers.
- Geddis, A., Onslow, B., Beynon, C., & Oesch, J. (1993). Transforming content knowledge: learning to teach about isotopes. *Science Education*, 77(6), 575-591.
- Geddis, A., & Wood, E. (1997). Transforming subject matter and managing dilemmas: a case study in teacher education. *Teaching and Teacher Education*, 13(6), 611-626.
- Gerking, J. (2003). "Turn on" the evolution light bulb. *The Science Teacher*, 70(8), 8.
- Gess-Newsome, J. (1999). Secondary teachers' knowledge and beliefs about subject matter and their impact on instruction. In J. Gess-Newsome & N. Lederman (Eds.). *Examining pedagogical content knowledge: The construct and its implications for science education*. Dordrecht: Kluwer Academic Publishers. pp. 51-94.
- Gravetter, F., & Forzano, L. (2009). *Research methods for the behavioural sciences* (3rd ed). California. Wadsworth Cengage Learning.
- Green, J., & Caracelli, V. (1997). Defining and describing the paradigm issue in mixed-method evaluation. In J. Green and V. Caracelli (Eds.). *Advances in mixed-method evaluation: the challenges and benefits of integrating diverse paradigms*. *New Directors for Evaluation*, 74. San francisco. Jossey-Bass.
- Gregory, T. (2009). Understanding natural selection: essential concepts and common misconceptions. *Evolution Education Outreach*, 2(2), 156-175.
- Grossman, P. (1989). A study in contrast: sources of pedagogical content knowledge for secondary English. *Journal of Teacher Education*, 40(5), 24-31.
- Grossman, P., & Stodolsky, S. (1995). Content as context: the role of school subjects in secondary school teaching. *Educational Researcher*, 24(8), 5-11.
- Guba, E., & Lincoln, Y. (1983). Epistemological and methodological bases of naturalistic inquiry. In Madaus, Scriven and Stufflebeam (Eds.). *Evaluation models*. Boston: Kluwer Nijhoff.
- Guba, E., & Lincoln, Y. (1994). Competing paradigms in qualitative research. In N. Denzin and Y. Lincoln (Eds). *Handbook of qualitative research*. Thousand Oaks. California: Sage. pp. 105-117.
- Halim, L., & Meerah, S. (2002). Science trainee teachers' pedagogical content knowledge and its influence on physics teaching. *Research in Science and Technology Education*, 20(2), 215-225.
- Hall, G., & Hord, S. (2006). *Implementing change: patterns, principles, and potholes*. (2nd ed.). Boston: Pearson.
- Hashweh, M. (1987). Effects of subject matter knowledge in the teaching of biology and physics. *Teaching and Teacher Education*, 3, 109-120.
- Haury, D. (1996). Teaching evolution in school science classes. *Eric Digest*.
<http://www.ericdigests.org/198-1/evolution.htm>. Accessed 01 March 2010.

- Hausfather, S. (2001). Where's the content? The role of content in constructivist teacher education. *Educational Horizons*, 80(1), 5-19.
- Hemenway, R. (1999). The evolution of a controversy in Kansas shows why scientists must defend the search for truth. *The Chronicle of Higher Education*, 46(10), 7-8.
- Hendrik (2009). Creationism taught as science in South African state schools. *The Word of the Blog*. <http://wordoftheblog.wordpress.com/>
- Herek, G. (1995). Developing a theoretical framework and rationale for a research proposal. In W. Pequegnant & E. Stover (Eds.). *How to write a successful research grant application: a guide for social and behavioural scientists*. New York: Plenum Press, pp. 85-91.
- Hoyakem, H., & BouJaoude, S. (2008). College students' perceptions of the theory of evolution. *Journal of Research in Science Teaching*, 45(4), 395-419.
- Hyman, L., Lamb, J., & Bulmer, M. (2006). The use of pre-existing survey questions: implications for data quality. Proceedings of European Conference of Quality in Survey Statistics. <http://epp.eurostat.ec.europa.eu/portal/pages/portal/quality/documents/pre-existing%20surveys>. Accessed 08August2011.
- Johnson, M. (1977). *A review of research methods in education*. Chicago: Rand McNally College Publishing Company.
- Johnson, R., & Onwuegbuzie, A. (2004). Mixed-methods research: a research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.
- Keeves, J. (Ed.). (1988). *Educational research, methodology and measurement: an international handbook*. London: Pergamon Press.
- Kerlinger, F. (1986). *Foundations of behavioural research* (3rd Ed.). New York: Holt, Rinehart and Winston, Inc.
- Kirchweger, G. (2001). The biology of skin color: black and white. The evolution of race was as simple as the politics of race is complex. *Discover*, 22 (2), 1-3. http://www.pbs.org/wgbh/evolution/library/07/03/text_pop/l_073_04.html.
- Lawson, A., & Worsnop, W. (1992). Learning about evolution and rejecting a belief in special creation: effects of reflective reasoning skill, prior knowledge, prior belief and religious commitment. *Journal of Research in Science Teaching*, 29(2), 143-166.
- LeCompte, M., & Preissle, J. (1993). *Ethnography and qualitative design in educational research* (2nd ed.). San Diego: Academic Press.
- LeCompte, M., & Schensul, J. (1999). *Designing and conducting ethnographic research*. Walnut Creek, California: AltaMira Press.
- Leedy, P. (1989). *Practical research planning and design* (4th ed.). New York: McMillan Publishing Company.

- Lincoln, Y. and Guba, E. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N, Denzin and Y, Lincoln, (Eds.). *Handbook of Qualitative Research*. London: Sage Publication Inc.
- Lombrozo, T., Thanukos, A., & Weisberg, M. (2008). The importance of understanding the nature of science for accepting evolution. *Evolution Education Outreach*, 1(3), 290-298.
- Loughran, J., Mulhall, P., and Berry, A. (2004). In search of pedagogical content knowledge in science: developing ways of articulating and documenting professional practice. *Journal of Research in Science Teaching*, 41, 370-391.
- MacMillan English Dictionary for Advanced Learners: international student edition (2002). (1st Ed.). London: MacMillan Publishers Ltd.
- Magnusson, S., Krajcik, J., & Borko, H. (1999). Nature, sources and development of pedagogical content knowledge for science teaching. In J. Gess-Newsome & N. Lederman (Eds.), *Examining pedagogical content knowledge*. Dordrecht: Kluwer Academic Publishers. pp 95-132.
- Mail & Guardian (2007). Schools' (r)evolution: religious backlash expected as evolution forms part of curriculum. October 26 – November 1. pp 9.
- Makgoba, M. (1999). Professional Educators' Union (Gauteng region) comments on teacher development. Gauteng Department of Education: District Development Conference, 21-23 September 1999. Gauteng Department of Education, Buffelspoort. pp 72-73.
- Marks, R. (1990). Pedagogical content knowledge. From a mathematical case to a modified conception. *Journal of Teacher Education*, 41(3), 3-11.
- Mashalaba, P. (2005). Grade 9 Natural Sciences textbooks as support materials for "activity-based" lessons in curriculum 2005 classrooms. Unpublished MSc research report. University of the Witwatersrand, Johannesburg.
- Matimolane, M. (2004). The lesson planning practices of Natural Science teachers implementing Curriculum 2005. Unpublished MSc research report. University of the Witwatersrand, Johannesburg.
- Matthews, D. (2001). Effects of a curriculum containing creation stories on attitudes about evolution. *The American Biology Teacher*, 63(6), 404-409.
- McCarthy, T., & Rubidge, B. (2005). *The story of Earth and life: a southern African perspective on a 4.6-billion-year journey*. Cape Town: Struik Publishers.
- McMillan, J., & Schumacher, S. (1993). *Research in education: a conceptual introduction*. New York: Harper Collins Publishers.
- Meadows, L., Doster, E., & Jackson, D. (2000). Managing the conflict between evolution and religion. *The American Biology Teacher*, 62(2), 102-107.
- Mertens, D. (2005). Research and evaluation in education and psychology (2nd ed). *Integrating diversity with quantitative, qualitative and mixed-methods*. California. Sage Publications, Inc.

- Miller, M. (2007). Pedagogical content knowledge. In G. Bodner., & M. Orgill. (Eds.), *Theoretical frameworks for research in chemistry/science*. Upper Saddle River. Pearson-Prentice-Hall. pp 86-105.
- Mishra, P. & Koehler, M. (2006). Technological pedagogical content knowledge: a framework for teacher knowledge. *Teachers' College Records*, 108(6), 1017-1054.
- Moolla, M., Rollnick, M., & Stanton, M. (2004). How do teachers acquire pedagogical content knowledge? In Buffler, A & Laugksch, R.C. (Eds). Proceedings of the 12th Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education. Durban. pp. 679-684.
- Moore, R. (2003). Legal issues surrounding evolution and creationism. *The Science Teacher*, 70(8), 68-70.
- Moore, R. (2007). What are students taught about evolution? *McGill Journal of Education*, 42, 177–188.
- Moore, R., Decker, M., & Cotner, S. (2010). No prospect of an end ... Chronology of the evolution-creationism controversy. Santa Barbara: Greenwood Press.
- Moore, R., Froehle, A., Kiernan, J., & Greenwald B. (2006). How biology students in Minnesota view evolution, the teaching of evolution & the evolution-creationism controversy. *The American Biology Teacher*, online publication, pp. 35-41. Retrieved 2008
- Moore, R., & Kraemer, K. (2005). The teaching of evolution and creationism in Minnesota. *The American Biology Teacher*, 67(8). 457-466.
- Moran, L. (1993). *What is evolution?* The TalkOrigins Archive: exploring the creation/evolution controversy. <http://www.talkorigins.org/faqs/evolution-definition.html>. Accessed 10 August 2008.
- Muehlenbein, M. (2010). Human evolutionary biology. Cambridge: Cambridge University Press.
- Nadelson, L. (2009). Preservice teacher understanding and vision of how to teach biological evolution. *Evolution Education and Outreach*, 2(3), 490-504.
- National Academy of Sciences and Institute of Medicine of the National Academies (2008). *Science, evolution and creationism*. Washington, DC: The National Academies Press.
- National Association of Biology Teachers. (1995). *Position statement on teaching evolution*. Adopted by Board of Directors, November 1985. <http://www.nabt.org/sites/SI/Index.php?=65>. Accessed April 2008.
- National Science Teachers' Association. (2004). NSTA Position Statement: the teaching of evolution. <http://www.nsta.org>. Accessed April 2008.
- National Science Teachers' Association. (2005). NSTA Position Statement: the teaching of evolution. <http://www.nsta.org>. Accessed April 2008.
- Nehm, R., & Reilly, L. (2007). Biology majors' knowledge and misconceptions of natural selection. *Bioscience*, 57(3), 263-271.

- Nelson, C. (2008). Teaching evolution (and all of biology) more effectively: strategies for engagement, critical reasoning, and confronting misconceptions. *Integrative and Comparative Biology*, 48(2), 213-225/
- Ngxola, N. (2012). Teaching evolution in a new curriculum: Life Sciences teachers' concerns and needs. Unpublished MSc research report. University of the Witwatersrand, Johannesburg.
- Ngxola, N., & Sanders, M. (2008). Teaching evolution in the new curriculum: *Life Sciences* teachers' concerns. Proceedings of the 16th Annual Conference of the South African Association for Research in Mathematics, Science, and Technology Education. University of Lesotho, Maseru, Lesotho. pp. 799-807.
- Oppenheim, A. (1966). *Questionnaire design and attitude measurement*. London: Heinemann.
- Osborne, R., & Freyberg, P. (1985). Children's science. In R. Osborne & P. Freyberg (Eds.), *Learning in science*. Auckland, NZ: Heinemann, pp. 5-14.
- Osif, B. (1997). Evolution and religious beliefs: a survey of Pennsylvania high school teachers. *The American Biology Teacher*, 59(9), 552-556.
- Ottevanger, W. (2001). Materials development as a catalyst for science curriculum implementation in Namibia. Doctoral dissertation. Enschede: University of Twente.
- Parry, K. (2008). Memoirs of an ex-Christian: evolution and me: a personal story (part 3- the golden thread). <http://mexc.blogspot.com/2008/11/evolution-and-me-personal-story-part-3.html>. Accessed June 2009.
- Patton, M. (1980). *Qualitative evaluation methods*. London: Sage Publications.
- Patton, M. (2002). *Qualitative research and evaluation methods*. (3rd ed.). London: Sage Publications.
- Pigliucci, M. (2005). Evolution's importance to society. <http://www.actionbioscience.org/evolution/pigliucci.html>. Accessed August 2009.
- Pillay, R. (2002). Evaluating the effectiveness of in-service training to facilitate the use of activity-based lessons in Natural Sciences classrooms. Unpublished MSc research report. University of the Witwatersrand, Johannesburg.
- Prinou, L., Halkia, L., & Skordoulis, C. (2008). What conceptions do Greek school students form about biological evolution? *Evolution Education Outreach*, 1(3), 312-317.
- Radhakrishna, R., Yoder, E. & Ewing, J. (2007). Strategies for linking theoretical framework and research types. Proceedings of the 2007 America Association Agricultural Education Research Conference, 34, 692-694. The Pennsylvania State University.
- Raven, P., Johnson, G., Losos, J., & Singer, S. (2005). *Biology* (7th ed.). New York: McGraw-Hill.
- Reece, J., Urry, L., Cain, M., Wasserman, S., Minorsky, P., & Jackson, R. (2011). *Campbell Biology*. (9th ed.). California. Pearson.
- Reeves, T., & Hedberg, J. (2003). *Interactive learning systems evaluation*. Englewood Cliffs, New Jersey: Education Technology Publications.

- Ridley, M. (2004). *Evolution*. (3rd ed.). Malden, M.A. Blackwell Scientific Publishing.
- Rice, J., Warner, D., Kelly, C., Clough, M., & Colbert, J. (2010). The theory of evolution is not an explanation for the origin of life. *Evolution Education Outreach*, 3(2), 141-142.
- Robbins, J., & Roy, P. (2007). Natural selection: identifying & correcting non-science student's preconceptions through an inquiry-based, critical approach to education. *The American Biology Teacher*, 69(8), 460-466.
- Rutledge, M., & Mitchell, M. (2002). High school biology teachers' knowledge structure, acceptance and teaching of evolution. *The American Biology Teacher*, 64(1), 21-27.
- Rutledge, M., & Warden, M. (2000). Evolution theory, the nature of science and high school biology teachers: critical relationships. *The American Biology Teacher*, 62(1), 23-28.
- Sale, J., Lohfeld, L., & Brazil, K. (2002). Revisiting the quantitative-qualitative debate: implications for mixed-methods research. *Quality and Quantity*, 36, 43-53.
- Sanders, M. (1993). A framework for improving the quality of quantitative research in science education. Paper presented at the annual conference of the National Association for Research in Science Teaching. 15-19 April. Atlanta, Georgia, USA.
- Sanders, M. (1998). Improving the quality of science education research by promoting the "rival hypothesis". Paper presented at the Annual Conference of the National Association for Research in Science Teaching. 19 – 22 April. San Diego, California, USA.
- Sanders, M. (2008). Teaching about "evolution": More than just knowing content. Paper presented at the biennial conference of the South African Association of Science and Technology Education. 1-4 July. Johannesburg, South Africa.
- Sanders, M., & Kasalu, L. (2004). Lack of understanding of policy as a factor affecting the theory-practice gap in implementing Curriculum 2005. In A. Buffer and R. Laugksch (Eds). *Research in Mathematics, Science and Technology Education*. January 2004. University of Cape Town, Cape Town: pp. 917-925.
- Sanders, M., & Mokuku, T. (1994). How valid is face validity? Proceedings of the Southern African Association for Research in Mathematics, Science and Technology Education. Durban: University of Durban Westville. 479-489.
- Sanders, M., & Nduna, B. (2007). So what's the new curriculum all about? Understanding the requirements of the new South African curriculum: implications for science teachers. In H. Van Rooyen and J. De Beers (Eds). *Teaching science in the OBE classroom*. Braamfontein, South Africa: McMillan South African publishers (Pty) Ltd.
- Sanders, M., & Ngxola, N. (2009). Identifying teachers' concerns about teaching evolution. *Journal of Biological Education*, 43(3), 121-127.
- Scharmann, L. (2005). A proactive strategy for teaching evolution. *The American Biology Teacher*, 67(1), 12-16.
- Schumacher, S. & McMillan, J. (1993). *Research in education* (3rd ed.). New York: Harper Collins College publishers.

- Schwabb, J. (1978). Education and the structure of the disciplines. In I. Westerbury and N. Wilkof (Eds). *Science, curriculum and liberal education: selected essays*. Chicago: The University of Chicago Press.
- Science in Africa. (2003). Teaching evolution in schools “not a priority”. <http://www.scienceinafrica.co.za/2003/march/evolve.htm>. Accessed June 2008.
- Scott, E. (1999). Problem concepts in evolution: cause, purpose, design, and chance. National Centre for Science Education: defending the teaching of evolution in public schools. [http://www.ncselegacy.org/problem/concepts in evolution](http://www.ncselegacy.org/problem/concepts%20in%20evolution). Accessed December 2009
- Shulman, L. (1986). Those who understand: knowledge growth in teaching. *Educational Researcher*, 152(2), 4-14.
- Shulman, L. (1987). Knowledge and teaching: foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.
- Smaling, A. (1994). The pragmatic dimensions: paradigmatic and pragmatic aspects of choosing a qualitative or quantitative method. *Quality and Quantity*, 28, 233-249.
- Smith, M. (2010). Current status of research in teaching and learning evolution: II. pedagogical issues. *Science and Education*, 19, 539-571.
- Smith, III, J., diSessa, A., & Roschelle, J. (1993). Misconceptions reconceived: a constructivist analysis of knowledge in transition. *The Journal of the Learning Sciences*, 3(2), 115-163.
- Smith, D., & Neale, D. (1989). The construction of subject matter knowledge in primary science teaching. *Teaching and Teacher Education*, 5(1), 1-20.
- Smyth, R. (2004). Exploring the usefulness of a conceptual framework as a research tool: a researchers’ reflection. *Issues in Educational Research*, 14, 1-10.
- Stears, M. (2006). The FET curriculum and teaching of evolution: what are the challenges facing teachers? Proceedings of the 3rd Biennial Conference of the South African Association of Science and Technology Educators, University of Kwazulu-Natal, Durban, pp. 177-182.
- Strauss, A., & Corbin, J. (1990). *Basis of qualitative research: grounded theory, procedures and techniques*. Newbury Park: Sage.
- Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: combining qualitative and quantitative approaches*. *Applied social research methods series*, 46. Thousand Oaks, California: Sage Publications.
- The Clergy letter project. http://www.butler.edu/clergyprojct.org/Christian_Clergy/ChrClergyLtr.htm. Accessed 25 June 2011.
- The University of California Museum of Palaeontology, Berkeley (2006). Misconceptions. On the website “Understanding evolution for teachers”. <http://evolution.berkeley.edu/evosite/misconceptions/index.shtml>. Accessed December 2010. <http://evolution.berkeley.edu/evolibrary/misconceptions.faq.php>. Accessed December 2010. <http://evolution.bekerly.edu/evosite/nature/IIprocess.shtml>. Accessed July 2012.

- Trani, R. (2004). I won't teach evolution: it's against my religion. And now for the rest of the story. *The American Biology Teacher*, 66(6), 419-427.
- Tuckman, B.W. (1978). *Conducting educational research* (2nd ed.). New York: Harcourt Bruce Jovanovich, Inc.
- Van Dalen, D. (1973). *Understanding educational research: an introduction* (3rd ed.). New York: McGraw-Hill Book Company.
- Van Dijk, E. (2009). Teachers' views on understanding evolutionary theory: a PCK-study in the framework of the ERTE-model. *Teaching and Teacher Education*, 25, 259-267.
- Van Driel, J., de Jong, O. & Verloop, N. (2002). The development of preservice chemistry teachers' pedagogical content knowledge. *Science Education*, 86(4), 572-590
- Van Teijlingen, E., & Vanora, H. (2001). The importance of pilot study. *Social Research Update*, (5). <http://sru.soc.surrey.ac.uk/SRU35.html>. Accessed 08 August 2011.
- Wallace, J., & Loudon, W. (2000). *Teachers' learning (stories of science education)*. Hingham, M.A: Kluwer Academic Publishers.
- Weld, J., & McNew, J. (1999). Attitudes toward evolution. *The Science Teacher*, 66(9), 27-31.
- Wiles, J. & Branch, G. (2008). Teachers who won't, don't or can't teach evolution properly: a burning issue. *The American Biology Teacher*, 70(1), 6-7.
- Wuerth, M. (2004). Resources for teaching evolution. *The American Biology Teacher*, 66(2), 109-113.
- Zimmerman, M. (1987). The evolution-creation controversy: opinions of Ohio high school teachers. *Ohio Journal of Science*, 87(4), 115-125