



Bibliography

Bibliography

- AbdulKareem, S. (2004). Investigating science teachers' beliefs about science and teaching: struggles in implementing science education in Saudi Arabia, Doctorate Dissertation in Education. *Dissertation abstracts international*, 65 (12). June 2007.
- Acharya Ramamurthy Committee (1990). In Sharma, R.C. (2006). *Modern Science Teaching*. New Delhi: Dhanpat Rai publishing comp.
- All India seminar on teaching science. (1956). In Sharma, R.C. (2006). *Modern Science Teaching*. New Delhi: Dhanpat rai publishing comp.
- American association for the advancement of science (AAAS). (1971). Development in elementary school science. A Report of seven regional conference for school Administration. Washington: N.C.F.
- Anwer, G. (1991). The effect of short-term content enrichment programme [EP] to overcome the deficiencies of trainees in science subjects in TCH course. Unpublished doctoral dissertation. In N. Vaidya (Ed.), *Fifth survey of Research in Education*, New Delhi: NCERT.
- Awasthi, K. (2009). *Development of an intervention programme to maximize community participation in implementation of SSA in schools of Gujarat*, Unpublished Doctoral dissertation in education. Vadodara: CASE.
- Baland, D (1999). An investigation into the Study Habits, Reading Interest, Attitude towards Teaching and their bearing upon the Achievement of the Pre-Service Teachers, Unpublished doctoral dissertation, M. D. University. In NCERT (Ed.) *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Barman, S. (1983). *Conception of the nature of science*. Dissertation Abstracts International, vol.45, 483 A.
- Boyd, H.D. (2007). From learning science to teaching science: What transfers? Unpublished doctoral dissertation, University of Colorado in *Dissertation Abstracts International*. 65(12). June 2007
- Bronowski, J. (1956). *Science and human value*. New York: Harper and Row.
- Chattopadhyaya Committee Report (1983) in Position paper on *National Focused Group Teacher Education for Curriculum Reform* (2006). New Delhi: NCERT.
- Chunavala, S. (2006). Science Education: A Trend Report. In NCERT (Eds.), *Sixth Survey of Educational Research (1993-2000)*. New Delhi: NCERT.
- Commission on reorganization of secondary education. (1875). In Sen, B.R.(2005). *Teaching Science in secondary schools*. New Delhi: Commonwealth publishers.
- Commission on secondary school curriculum of the progressive education association. (1938). In Sen, B.R. (2005). *Teaching Science in secondary schools*. New Delhi: Commonwealth publishers.
- Conant, J. (1951). *Science and common sense*. New York: Holt, Rinehart & Winston. In Mohpatra & Mohpatra. (1999). *New dimension of science curriculum an operational approach*. New Delhi: Commonwealth Publishers.

- Cook, M.T. (2007). The effectiveness of constructivist science instructional methods on high school students' motivation. Doctoral Dissertation in Education. *Dissertation Abstract International*. 70(5).October 2007
- Dee S.S. (2006). Towards an understanding of an education program: Listening participants' stories. Doctoral dissertation in *Dissertation Abstract International* 68(5).December 2006.
- Deopuria, R.P. (1984). A comparative study of teaching science through environmental and traditional approach in schools of Madhya Pradesh, Unpublished doctoral dissertation. In M.B. Buch (Ed).*Fourth survey of research in education*, New Delhi: NCERT.
- University of Louisiana at Monroe (2004). *Department of Education. The effect of an integrated, activity-based science curriculum on students' achievement, science process skills and attitude towards science*. Retrieved, August 6 2006 from http://ejlts.ucdavis.edu/sites/ejltts.ucdavis.edu/files/articles/turpin_doc.pdf
- Desai, (1986). A Critical Study of Science Teaching Programme at Middle School level in Karnataka state, Unpublished Doctoral Dissertation. In M. B. Buch (Ed). *Fourth survey of research in education*. New Delhi: NCERT
- Devonshire Commission Report. (1875). In Sharma, R C (2006). *Modern Science Teaching*. New Delhi: Dhanpat rai publishing comp.
- Dewey, J. (____) in Vaidya, N. (2003). *Science teaching for the 21st century*. New Delhi: Deep and Deep Publications Ltd
- Dimichino, C. (2007). Teacher enactment of an inquiry-based science curriculum and its relationship to student interest and achievement in science. Teachers College, Columbia University. *Dissertation Abstract International*. 70(5).October 2007.
- Educational Research and Information Centre (2007) retrieved, November 14 2009 from <http://ericae.net/nav-au.htm>
- Fitzpatrick, F.C. (1960). *Policies for science education*. Bureau of Publications, New York: Columbia University
- Gaikwad, K. (1993). Effect of Mastery over theory and planning skills upon teacher-trainees' performance of Concept Attainment Model unpublished doctoral dissertation, Shivaji University. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Ganapathi, R.G.(1993). A Factor Analytical Study of the Para Academic Activities in Improving Science Teaching at Secondary School Level. Doctoral dissertation in Education. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- George, J. (1999). A Study of Innovations Issues and Problems of Teacher Education in Bihar in Recent Year. Doctoral dissertation, Patna University. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- George, J. (2001). *Culture and science education: A look from the developing world*. from Retrieved, 20June,2010.: <http://www.actionbioscience>
- George, S. (2007). Use of Modern Instructional Strategies: Awareness and Achievement of Student Teachers at Primary Level. Doctoral dissertation, Mahatma Gandhi University In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.

- Goel, A. (2002): Effect of the Learning inputs provided in Teacher Education Program on Teaching Efficiency of Teachers. Doctoral dissertation, Banasthali Vidyapith, Rajasthan. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Goswami.(2003). Effect of Participatory Teacher Education Program on the Conceptual Development and Self Development of Student Teachers. Unpublished Doctoral Dissertation, Bansthal Vidyapith. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Hakan, A. (2007). The impact of a STS/Constructivist learning approach on the beliefs and attitudes of pre-service science teachers. Attitudes of science teachers, Doctoral dissertation. In *Dissertation Abstract International*. 70(5). October, 2007.
- Heather, S. S. (2006). Profiles of pre-service teacher education: An investigation into the nature of selected exemplary programs in Jamaica and Michigan. Doctoral dissertation in Education . In *Dissertation Abstract International*.68(4).October, 2006.
- Heiss, E.D. (1961). *Modern science teaching*. New York: Macmillan Company
<http://insa.acpservers.com/html/home.asp>
<http://www.exploratorium.edu/ifi/resources/researches/constructivism.html>
- Ilker, K. & Giray, B. (2008). *An Assessment of Factors Related to Science Achievement of Turkish Students*, Department of Secondary Science and Mathematics Education, Middle East Technical University, Ankara: Turkey
- Indian Education Commission. (1964-66). In Sharma, R C (2006). *Modern Science Teaching*. New Delhi: Dhanpat Rai publishing comp.
- Ishwarbhai Patel Committee.(1977). In Sharma, R. C. (2006).*Modern Science Teaching*.New Delhi: Dhanpat rai publishing comp.
- Jain, A.K.(2005). INSA {Indian national science academy},New Delhi. Retrieved date: August 20, 2006, from <http://www.interacademies.net/?id=3395>.
- Jain, V.K. (1994). *A Study of Factors Affecting Academic Achievement of Science Subjects of Tribal Area Students with Special Reference to New Education Policy*. Ph.D. (Edu.),Barkhtullah University:Bhopal
- Jones, (2002). The effects of video-based and activity-based instruction on high school students' knowledge, attitudes, and behavioral intentions related to seat belt use. In *Dissertation Abstracts International*. 64 (3) September,2003.
- Jones, (2005). Implementing inquiry-based kits within a professional development school model. In *Dissertation abstracts International*.66(4).October, 2005.
- Joshi, A. (1987). Evolvment of instructional strategy for teaching elements of science to class IX students of M.P. state, Doctoral dissertation in Education. In M.B. Buch, (Ed.).*Fourth survey of research in education*, New Delhi: NCERT.
- Kansakar, L.P. (1996). An Investigation into the Understanding of Science and Scientific Temper: A Cross Cultural Study. Doctoral dissertation in Education. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.

- Mehportar, R. (____). A trend report in Teacher and Teaching in (Ed.) In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Mehrotra, R.N. (2006). *Teacher and Teaching; A trend Report*, In NCERT (Eds.), *Sixth Survey of Educational Research (1993-2000)*. New Delhi: NCERT.
- Menon, M.B. (1984). *Evolving a multi media approach to teaching at post graduate level*, Unpublished Doctoral Dissertation in education. Vadodara: CASE.
- Mohapatra, J. K. (1989). Four dimensions of the teaching-learning of science: Characteristics and implications. Doctoral Dissertation in Education. In N. Vaidya, N. (Ed.). *Fifth survey of research in education*, New Delhi: NCERT
- Morrison, B. (2005). Three case-studies of three high school teachers' definitions, beliefs and implementation practices of inquiry based science method including barriers to and facilitators of successful implementation. In *Dissertation abstracts international*. 62(3) October 2005.
- Muddu, S. (1978). A study of effectiveness of the use of motion pictures as aids in the teaching of biology. In M.B. Buch, (Ed). *Fourth survey of research in education*, New Delhi: NCERT.
- National Advisory Committee (1993). In Rajput, J.S.(1998).*Policy perspectives in education*, New Delhi: NCERT retrieved from <http://ncteindia.org/pub/policy/policy0.htm>
- National Council of Educational Research and Training (1991). *Secondary Teacher Education Curriculum guideline and Syllabi*. New Delhi: Vijeta offset printing press
- National Council of Educational Research and training. (1961). In Sharma, R C (2006). *Modern Science Teaching*. New Delhi: Dhanpat rai publishing comp.
- National Council of Educational Research and Training.(1964). *Education and National Development; A report of the education commission 1964-66*. New Delhi: NCERT.
- National Council of Teacher Education.(1996).*Curriculum Framework for Teacher Education*, New Delhi: NCTE.
- National Policy on Education. (1986). In Sharma, R C (2006). *Modern Science Teaching* .New Delhi: Dhanpat rai publishing comp.
- National Science Education Standard.(1996).From www.nap.edu/catalog.php?record_id=4962
- National Society for the study of Education.(1920). In Sen, B.R. (2005). *Teaching Science in Secondary schools*. New Delhi: Commonwealth Publishers.
- NCERT. (2000).*National Curriculum Framework for School Education*. New Delhi: NCERT
- NCERT. (2001). Guidelines and syllabus for secondary stage. In Sharma, R C (2006). *Modern Science Teaching*. New Delhi: Dhanpat rai publishing comp.
- NCERT.(2005).*National Curriculum Framework for School Education*. New Delhi: NCERT
- NCTE. (2006). Draft Curriculum Framework for Teacher Education Retrieved from

- NCTE. (2009). *National Curriculum Framework for Teacher Education; Towards preparing professional and humane teacher*. New Delhi: NCTE
- Norwood Report. (1943). In Sharma, R C (2006). *Modern Science Teaching*. New Delhi: Dhanpat rai publishing comp.
- Padma, T V. (2005). *Indian science teaching overhaul*. Retrieved date; October 25, from : <http://www.interacademies.net/?id=3395>
- Patil, G.S. (1996). A Critical Study of Scientific Attitude of Secondary School Students from Rural Area and Construction of A Standardized Scale for Its Measurement. Doctoral dissertation in Education, *Sixth survey of Research in Education*, Indore: Devi Ahalya University
- Patil. A.(2006). The development and implementation of a teacher education model in environmental science education for Indian certificate of secondary education (ICSE) schools. Doctoral Dissertation in Education. In *Dissertation Abstract International*. 68(4).October, 2006.
- Pinto, R. (2007), *New perspectives for learning: innovations in science teaching* retrieved date March 27, 2008 from <http://www.pjb.co.uk/npl/bp33.pdf>
- Prasad, J. (1999). *Practical aspects in teaching of science*. New Delhi: Kanishka Publication
- Raijiwala B.C. (1975). *Changing teacher behavior in the teaching of science and studying its effects on pupils*, Doctoral Dissertation in Education, CASE: Vadodara
- Rajput, N. (1983). In Buch, M.B. (Ed). Fourth survey of research in education, New Delhi: NCERT.
- Rastogi, A. (1995). A Study of Styles of Learning and Thinking in Relation to Cognitive Style, Creativity and Achievement in Science at High School Level. Doctoral dissertation in Education. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Rathore, J. (1999). A Study of the Scholastic Achievement of Children Studying at Primary Level in Environmental Study (Science) with Special Reference to MLLS and Development of Remedial Teaching Strategies. Doctoral dissertation in Education. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Report of Education Commission (1966).*Education and National development* .Gov. of India: NCERT
- Report of the secondary education commission. (1953). In Sharma, R.C. (2006). *Modern Science Teaching*. New delhi : Dhanpatrai Publishing comp.
- Russo, _____. (2004). "Observation as an experience: using the aesthetics John Dewey as a model for inquiry." Doctoral dissertation in Education In *Dissertation Abstract International*. 62(3) October, 2005.
- Scientific Policy Resolution (1958). Retrieved Date, August 20, 2006 from <http://www.dst.gov.in/stsysindia/spr1958.htm>.
- Secondary Education Commission (1953). In Sharma R.C. (2006). *Modern Science Teaching*. New Delhi: Dhanpatrai Publishing comp.

- Shah, B.B. (1981). *An experimental investigation of the effects of selected Teaching Strategies on the development of creative thinking and achievement in science*. Doctoral dissertation in Education. CASE: Vadodara.
- Sharma, A. (1999). *A Comparative Study of the Effectiveness of Science Teaching Methods Used by B.Ed. Students and Trained Graduate Teachers in Agra City*. Doctoral Dissertation in Education, Dr. B.R. Ambedkar University: Agra.
- Sharma, D. (1991). *India's lopsided science*, in bulletin of the Atomic scientists. (Vol.47, no.04, May, 1991, pp 32-36. from: <http://www.interacademies.net/>)
- Sharma, H.L. (1984). A critical study of the development of school science education in India from 1947 to 1977, Ph. D. in Education, In M.B. Buch, (Ed.), *Fourth survey of research in education*, New Delhi: NCERT.
- Sheikh, D.H. (1992). *Study of teaching competency of secondary school science teachers of Dhaka city*. Doctoral dissertation in education. CASE: Vadodara.
- Shinde, Y.K.(1982). A study of non-formal science activities in secondary schools of Maharashtra state with special reference to their impact on scientific attitude and achievements in science. Doctoral dissertation in Education. In M.B. Buch, (Ed.), *Fourth survey of research in education*, New Delhi: NCERT.
- Shrivastava, A. (2002). A Study of Learning Styles of Secondary School Students with Scientific Attitude and their Achievement in Science, Doctoral dissertation in Education, University of Lucknow. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Shukla, R. (2005). *India Science Report: Science Education, human resources and public attitude towards science.*, New Delhi: cirrus graphics limited.
- Shukla, S. (2003). A study of the effectiveness of video programmes with discussion, without discussion and traditional methods on the achievement of student teacher in context of certain variables. Doctoral dissertation in education. Gujarat University. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Singh, A.(1989). Identification of certain skills of science teaching and their effectiveness in relation to their creative ability, Doctoral Dissertation in education. In M.B. Buch, (Ed.), *Fourth survey of research in education*, New Delhi: NCERT.
- Singh, S. (2005). Effect of Classroom Questioning Behaviour Training on Teaching Competence of Students-Teachers and their Self-Concept, Doctoral dissertation in education. M. D. University, Rohtak. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Singhal, (1983). Ph.D. in Education. In M.B. Buch, (Ed.), *Fourth survey of research in education*, New Delhi: NCERT.
- Suthar H. S. (1998). *A Comparative Study of Science Education of Uttar Buniyadi Schools and Secondary Schools of Gujarat, [in Gujarati]*. Ph.D. in Education, Gujarat University: Ahmedabad.
- Thaker, S.C. (2001). Effectiveness of Mastery Learning Programme With Reference to Science Teaching. Doctoral Dissertation in Education. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- The Scientific Policy Resolution. (1958). In Sharma, R C (2006). *Modern Science*

- Teaching*. New Delhi: Dhanpat rai publishing comp.
- Thompson, E.T. (1973). Survey of status of science education in Oregon during 1973-74. Doctoral Dissertation. In *Dissertation Abstract International*. 35(7).October, 1973.
- Thomson Report (1916). Sharma, R C (2006). *Modern Science Teaching*. New Delhi: Dhanpat rai publishing comp.
- Umashree P.S. (1999). *Science curriculum and its transaction: An exploratory study in secondary schools of Vadodara, Gujarat*, Doctoral Dissertation in Education. Vadodara: CASE
- UNESCO Planning Mission.(1963). In Sharma, R C (2006). *Modern Science Teaching*. New Delhi: Dhanpat rai publishing comp.
- Vaidya N. (1991). Developing teaching –learning strategies for enhancing students' achievement in science. In *Fifth survey of research in education*, New Delhi: NCERT
- Vaidya, N. (1971). *The impact science teaching*. Oxford and IBH publication: New Delhi
- Vaidya, N. (1997). *Trend Report of Science Education*. In NCERT (Ed.) *Fifth Survey of Research in Education*. New Delhi: NCERT.
- Vaidya, N. (2003). *Science teaching for the 21st century*. New Delhi: Deep and Deep.
- Vardhini, V. P. (1983). *Development of a multimedia instructional strategy for teaching science (physics and chemistry) at secondary level*, Doctoral dissertation in Education. Vadodara: CASE.
- Vijay Kumari, S. (2002) A Study of the effect of different Methods of Teaching Science on the Achievement, Basic Science Process Skills and Scientific Attitude of Pupils with different Achievement Levels. Unpublished Doctoral dissertation. In NCERT (Ed.), *Sixth survey of Research in Education*, Indore: Devi Ahalya University.
- Volsey, J.E. (2006). Preparing new teachers to teach science: A comparison of traditional and experimental science methods course, Doctoral dissertation in Education. In *Dissertation Abstract International*. 68(4).October, 2006.
- Washton, N.S. (1967). *Teaching science creatively in the secondary schools*. London: W.B. Saunders Company.
- Wilson, P. L. (2007) *Measuring the learning effectiveness of Web-based teacher professional development in the hypothesis based learning method of teaching science*, Doctoral Dissertation in Education, 231pp. In *Dissertation Abstract International*. 70(4).October, 2007.