## **CURRICULUM VITAE**

## Dr. Sugra Chunawala

## Dean and Professor (H)

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# ACADEMIC QUALIFICATIONS

- Bachelor of Arts, Bombay University, Psychology, First Class, 1983
- Master of Arts, Tata Institute of Social Sciences, Medical and Psychiatric Social Work, Grade A, GPA (4.87), 1985
- Ph. D, University of Pune (Formerly Poona), Science Education in the Faculty of Physics, (work done at HBCSE, Tata Institute of Fundamental Research), 1992

#### **AWARDS**

- National Merit Scholarship by the Govt. of India for performance in B.A.
- Leela Wadia Prize for the best student in Medical and Psychiatric Social Work (1984-85)
- Late Prof. S. R. Rohidekar Award for 'Best Research Paper' (Trophy and Citation) to a paper titled 'Attitudes of teachers towards inclusive education' co-authored by Amit Sharma with Sugra Chunawala, at a two-day National Seminar on 'Redefining teacher education curriculum for nation building, organised by the Council for Teacher Education (CTE), Karnataka State Centre, June 2014.

## PROFESSIONAL DEVELOPMENT

- Professor (H) since January 2015 and Dean since July 20, 2016
- Associate Professor (G) 2008-2014
- Reader (F) at HBCSE 2004-2007
- Reader (E) at HBCSE 1999-2003
- Fellow (SD) at HBCSE 1994-1998

#### PROFESSIONAL EXPERIENCE:

#### **RESEARCH AREAS**

Socio-cultural studies in the context of education; Socio-scientific issues,

Gender issues in education, Diversity in science education; Inclusive education;

Collaborative learning; Design and Technology (D&T) in school education;

Students' and teachers' attitudes to science and mathematics education

My research interests include study of gender issues in education, attitudinal studies of students and teachers, and their perceptions of science, scientists, and technology. I have been involved in the study of students' alternative conceptions of science topics, students' conceptions of health, living and non-living, forests and experiments. I am involved in a research project aimed at developing design and technology units for introducing collaboration and communication centered design and technology education at the middle school in India. Two doctoral theses have been submitted on this project.

At present I am involved in research in the area of 'understanding students' negotiation of socio-scientific issues (SSI)'. The study aims to provide insights into students' informal reasoning patterns as well as their ideas about the nature of science. Another study that I am currently involved in relates to inclusive science education in elementary and secondary schools. The study focuses on learning the attitudes of parents, teacher and students with and without disabilities to inclusion and developing strategies for teaching science to children with visual impairments.

I have recently completed an international collaborative project titled Science Education and Diversity (SED) funded by the European Commission. It was led by a research group from the University of Exeter, UK and had partners from the Netherlands, Turkey, Lebanon and Malaysia, besides India. The aim of the project was to understand the dynamics of the relationships between culture, gender and science education in diverse contexts offered by the project partners and to design new flexible and diverse approaches to science education that are sensitive to diversity in a global context and so are of global value.

#### MATERIALS DEVELOPMENT

*Gender and science:* I have developed an exhibition on the theme of "Gender and Science" aimed at presenting the contributions of women scientists and focuses on the historical disjunction between women, science and technology. Booklets (in English and Marathi) containing the information have been prepared so that this material is accessible to a larger audience. The booklet is titled Gender and Science; an exhibition booklet, HBCSE, TIFR (2003).

**Book on Conflicts:** As part of the Activity Based Foundation Course on Science, Technology and Society, (Series editor- Chitra Natarajan), HBCSE, January 1999.

Book for M.Sc in Science Education: Co-author of a book in Marathi on <u>Assessment and Research for Science Education</u> through the distance mode, brought out by the

Yashwantrao Chavan Maharashtra Open University, titled "Mulyamapan va Sanshodhan" YCMOU, Chunawala S. and Ladage S. (2007).

#### **GRADUATE COURSES TAUGHT**

I have delivered graduate courses regularly for every batch of graduate students at HBCSE. These courses have been attended by other faculty also. The courses have ranged from methods of educational research both qualitative and quantitative, to cognitive development, language and science, sociological aspects of education, psychology and education, philosophy of education, readings in STME research and Studies in Technology and Society.

- 1. Research Methodologies in Education (2016)
- 2. Introduction to Science Technology Society Environment Education, with Aswathy Raveendran (2016)
- 3. Advanced Research Methods in Education (2015)
- 4. Methods of Science, Technology and Mathematics Education Research (2015)
- 5. Introduction to Qualitative and Quantitative Research, with Aniket Sule (2015)
- 6. Readings in Science, Technology and Mathematics Research (2014)
- 7. Introduction to Qualitative Research (2013)
- 8. The Foundations of Behavioural Research (2010)
- 9. The Foundations of Behavioural Research, with H.C. Pradhan, (2007) and individually in 2006 and 1992.
- 10. Philosophy of Education (2011)
- 11. Cognitive Development, with K. Subramaniam and J. Ramadas, (2009).
- 12. Introduction to Cognitive Science, with K. Subramaniam, J. Ramadas and G. Nagarjuna, (2006)
- 13. Cognitive Psychology (2000).
- 14. Psychology and Education (2008)
- 15. Sociological aspects of Education (2007)
- 16. Social Aspects of Education (2 semesters, 1995-1996)
- 17. Studies in Technology and Society (2005), Science and Technology Education (2002)
- 18. Readings in Gender and Science (2004)
- 19. Topics in Cognitive Science: Modularity of the Mind, with Chitra Natarajan (2002)
- 20. Language and Science (2001)

### OTHER ACADEMIC ACTIVITIES

## Co-ordinating the Post-Graduate Research Programme of Distance Education

HBCSE and the Yashwantrao Chavan Maharashtra Open University (YCMOU) have a collaboration beginning in 2001, wherein HBCSE runs a study centre for the Post Graduate Research Programme of YCMOU. Adult learners mostly primary and secondary

teachers enroll at the centre for a Master's degree in Arts, Science or Commerce in the area of Educational Communication or Subject Communication.

Every year on an average around 50-100 students enroll for these courses. A unique feature of the course is the emphasis on communication and research. Students have to complete a research project that may take the shape of product development (educational materials that are tested) or a project in the form of survey or experimental research. Apart from organising the courses which are presently in the form of 7 workshops per academic year of the 2 year degree programme, I am involved in teaching and grading assignments as well as guiding the research of the students.

I have also been involved in developing self learning materials for distance education students. The YCMOU interaction involves a form of professional development of teachers who are largely from rural areas of Maharashtra. This is a direct contribution to over more than a 1000 teachers over the past decade. Helping teachers who have no research background to conduct a small action research has been a challenge.

## Teacher Professional Development and Student Talent Nurture Programmes

I am and have been involved in conducting teacher professional development workshops in Mumbai, and also nationwide for a period of more than a decade. I regularly work as a resource person in the student talent nurture and teacher orientation or teacher educators' enrichment programmes held at HBCSE or held elsewhere by HBCSE. I conduct co-curricular sessions for science and mathematics students, and for teachers and teacher educators on topics such as; educational research, gender and education, language and science, conflicts and conflict resolution, critical thinking and decision-making.

I have been involved in the TPD (Teacher Professional Development) programme of HBCSE. I have delivered talks on socio-cultural issues in Education to the DIET teachers from various states such as, Gujarat (March 2013), Uttarakhand (February 2014), Madhya Pradesh as also for the Kendriya Vidyalaya Sanghatana (August 2013, September 2013 and January 2014). I have visited Pune Bal Bharti to discuss the standard 3 textbook written by a team of writers and gave my feedback. I also visited the National Council of Educational Research and Training to attend a discussion on Justice J.S. Verma's recommendations on TPD. I also was a member of a Sub Committee constituted to draft Norms and Standards for Teacher Education Programmes via ODL Courses by the NCTE (August and September, 2014).

I have also been conducting courses on the topic of qualitative research and research writing in a Certificate Course in Research Methodology, (October 2012, October 2013) organised by Somaiya College for Mumbai University College teachers and in an ICSSR sponsored Research Methodology Workshop in December 2012). I helped organise two teacher workshops at HBCSE funded by Australia India Council along with Dr. Rekha Koul of Science and Mathematics Education Centre, Curtin University, Australia (SMEC) in January 2012. These were titled *Collaborative Approach to Develop Science Teaching Methods Suitable for Addressing Diversity in Classroom.* The School Science and Research Development (SSRD) project which has recently started at HBCSE, has involved the making of an annual calendar for TPD programmes and taking up an interaction with a nearby school focusing on science learning.

## Convener of EpiSTEME-4

I was the convener of the Fourth International Conference to review research in Science, TEchnology and Mathematics Education (HBCSE, January 2011). Three strands formed the core of epiSTEME-4; (i) Historical, philosophical and socio-cultural studies of STM: implications for education, (ii) Cognitive and affective studies of STME, (iii) Curriculum and pedagogical studies in STME. Leading scholars were invited to give overviews of some of the themes within each strand. In addition, there were paper and poster sessions, pre and post conference workshops and a public lecture organised around the conference. A total of 102 papers were received from 17 countries. Each paper was sent to 3 reviewers for peer review, and the acceptance rate was 75 percent. There were 44 oral presentations and 22 poster presentations. More than 150 participants from about 20 countries, besides India attended the conference. The proceedings of the conference, and a follow up review book on the talks delivered by the review speakers, co-edited by me were published in 2011 by Macmillan, India and 2013 by Narosa, India.

# Thesis Supervisor

- 1. Farhat Ara: Investigating about 'Design' Among Students, Teachers and Designers: Towards Design Education at Middle School. April, 2013, TIFR Deemed University
- 2. Swati Mehrotra: Introducing Indian Middle School Students to Collaboration and Communication Centred Design and Technology Education: A Focus on Socio–Cultural and Gender Aspects. July 2008, TIFR Deemed University

## Presently guiding two doctoral students of HBCSE.

- 3. Aswathy Raveendran: Conceptualising 'Science Education for all' with a focus on understanding student's negotiation of socio-scientific issues. (Registered with TIFR Deemed University)
- 4. Amit Sharma: Inclusive science education in elementary and secondary schools with a focus on strategies for teaching science to children with visual impairments (Registered with TIFR Deemed University)

### Reviewer

- 1. Indian Educational Review, NCERT, National Council of Educational Research and Training, New Delhi, India
- 2. PATT 25 and CRIPT 8 conference: Perspectives on Learning in Design and Technology Education
- 3. Reviewer for epiSTEME-1 through epiSTEME-6 conference paper submissions

#### Examiner

- 1. Examiner of Masters and Doctoral theses of education submitted to the University of Mumbai
- 2. Examiner of Masters theses in Education submitted to K.J. Somaiya Comprehensive College of Education, Training and Research, Mumbai, Vidyavihar.
- 3. Examiner of Masters theses in Subject Communication of YCMOU, Nasik
- 4. Examiner of Masters theses of Educational System Management, a collaborative program between Atomic Energy Education Society (AEES), Mumbai and BITS Pilani.
- 5. Examiner of one Doctoral thesis in education of the University of Pune, and one of the Industrial Design Centre (IDC) of the Indian Institute of Technology (IIT), Mumbai.

#### PROFESSIONAL MEMBERSHIP

- 1. Member of GASAT (Gender and Science and Technology)
- 2. Member of IWSA (Indian Women Scientists Association)
- 3. Member of IAWS (Indian Association of Women in Science)
- 4. Founder Member and Executive Member, PCE (People's Council of Education)
- 5. Member of Board of University Teaching and Research (BUTR, YCMOU)
- 6. Member of Board of Studies in Education (SNDT Women's University)
- 7. Member of the Departmental Advisory Board of the department of Gender Studies of the National Centre for Educational Research and Training (NCERT)
- 8. Executive Board Member, 2016-2018, Representative of South Asia, International Organization for Science and Technology Education (IOSTE)
- 9. Local Managing Committee Member, KJ Somaiya Comprehensive College of Education, Training and Research

## **NATIONAL COMMITTEES**

- Member of the focus group that wrote Gender Issues in the Curriculum, Position Paper 3.2, National Curriculum Framework, 2005, NCERT.
- Member of Sub-Committee or drafting Regulations and Norms and Standards for Open and Distance Learning (ODL) Teacher Education Programmes i.e D.El.Ed, B.Ed and M.Ed courses in ODL Mode, 2014, NCTE.
- Was a member of a committee that was set up by the NCERT in the light of Justice Verma recommendations to examine various aspects of in-service teacher development towards recommending guidelines for the State Governments to implement meaningful and quality in-service teacher development programmes. (Feb 2013)

#### **PUBLICATIONS**

### Papers in Journals

- 1. Raveendran, A. and Chunawala, S. (2015). Values in Science: Making Sense of Biology Doctoral Students' Critical Examination of a Deterministic Claim in a Media Article. *Science Education*, *99* (4), 669–695. DOI: 10.1002/sce.21174
- 2. Raveendran, A. and Chunawala, S. (2015). Reproducing values: A feminist critique of reproductive health in the higher secondary biology textbook. *Indian Journal of Gender Studies*, 22 (2), 194-218.
- 3. Ara, F., Chunawala, S. and Natarajan, C. (2013). Investigating Indian elementary and middle school student's images of designers. *Design and Technology Education: An International Journal*, 18 (2), 50-65.
- 4. Ara, F., Chunawala, S. and Natarajan C. (2011). A Study Investigating Indian Middle School Students Ideas of Design and Designers. *Design and Technology Education: An International Journal*, 16.3, 64-73 (online first)
- 5. Ara, F., Natarajan, C. and Chunawala, S. (2009). A Study Exploring the Strategies Utilised by Indian Middle-School Students in Identifying Unfamiliar Artefacts. *Design and Technology Education: An International Journal*, 14.3, 47-57.
- 6. Khunyakari, R., Mehrotra, S., Chunawala, S. and Natarajan, C. (2007). Design and technology productions among middle school students: an Indian experience, *International Journal of Technology and Design Education*, *17*, *5-22*.
- 7. Mehrotra, S., Khunyakari, R., Natarajan, C. and Chunawala, S. (2007). Collaborative learning in technology education: D&T unit on puppetry in different Indian socio-cultural contexts. *International Journal of Design and Technology Education*. (2009) 19:1–14. Published Online 2007. DOI 10.1007/s10798-007-9037-1
- 8. Chunawala, S. (2004). A review of some literature on Biological Determinism, Research Centre for Women's Studies. *RCWS Newsletter: Vol. 25* (2), (3), Monsoon/Fall Issue.
- 9. Mahajan, B. S. and Chunawala, S. (1999). Indian secondary students' understanding of different aspects of health. *International Journal of Science Education*, *21*, (11), 1155-1168.
- 10. Chunawala, S. and Pradhan, H.C. (1993). A study of students' attitudes to school subjects: a preliminary report. *Journal of Education and Social Change, Vol. VII* (2), (3), 50-62.
- 11. Chunawala, S. (1991). Career choices of girls and the effects of Intervention in the form of provision of vocational guidance. *Journal of Education and Social Change, Vol. V* (2), 43-55.
- 12. Chunawala, S. (1989). Sex-role stereotyping of occupations among teachers and students. *Journal of Education and Social Change, Vol. III* (3), 89-102.
- 13. Chunawala, S. (1987). A study of the occupational choices of first generation learners. *Journal of Education and Social Change, Vol. I* (3), 52-64.

## In Proceedings

- 1. Datt, S., Shah, M., & Chunawala, S. (2017). Upper primary and secondary school science teacher's perception of creativity in science education. In A. Sharma and J. Rajeswaran (Eds.), *Creativity and cognition in art and design: Proceedings of the 1<sup>st</sup> International Conference on Creativity and Cognition in Art and Design (ICCCAD 2017)* (pp. 278-286). New Delhi: Bloomsbury.
- 2. Sharma, A., & Chunawala, S. (2016). Science learning and visualization: A case of students with and without vision, learning the atomic structure. In G. J. Vitus and C.Praveen (Eds.), Standards and benchmarks for excellence in learning and tecahing research: Conference proceedings of annual-cum-international conference of All India Association for Educational Research INTCONF 2015 (pp. 12-22). Kerala: University of Kerala.
- 3. Sharma, A. & Chunawala, S. (2015). *Using Diagrams in Inclusive Learning Situations*. In S. Chandrasekharan, S. Murthy, G. Banerjee and A. Muralidhar (Eds.). Proceedings epiSTEME 6: International Conference to Review Research on Science, Technology and Mathematics Education. Cinnamonteal. Pp 117-124
- 4. Mirani, S. & Chunawala, S. (2015). *Teachers' Perceptions of Dealing with Mixed Ability Classrooms*. In S. Chandrasekharan, S. Murthy, G. Banerjee and A. Muralidhar (Eds.). Proceedings epiSTEME 6: International Conference to Review Research on Science, Technology and Mathematics Education. Cinnamonteal. Pp 43-50
- 5. Birwatkar, P. & Chunawala, S. (2014). An innovative strategy for addressing diversity in a science class. In S. Nath (Ed.), Proceedings of the ICSSR Sponsored Two Day National Seminar on Innovations in 21<sup>st</sup> Century Education (pp. 73-86). Mumbai: K. J. Somaiya Comprehensive College of Education, Training and Research, Vidyavihar.
- 6. Chunawala, S., Birwatkar, P., Muralidhar, A. & Natarajan, C. (2013). *Looking at science through the lens of diversity: View of Indian students and teachers.* In G. Nagarjuna, A. Jamakhandi and E. Sam (Eds.). Proceedings of epiSTEME5: International Conference to Review Research on Science, Technology and Mathematics Education (pp. 185-191). Cinnamonteal.
- 7. Raveendran, A. & Chunawala, S. (2013). *Towards an understanding of socioscientific issues as means to achieve critical scientific literacy*. In G. Nagarjuna, A. Jamakhandi and E. Sam (Eds.). Proceedings of epiSTEME5: International Conference to Review Research on Science, Technology and Mathematics Education (pp.67-73). Cinnamonteal.
- 8. Sharma, A. & Chunawala, S. (2013). *Students with disabilities and their aspirations in sciences.* In G. Nagarjuna, A. Jamakhandi and E. Sam (Eds.). Proceedings of epiSTEME5: International Conference to Review Research on Science, Technology and Mathematics Education (pp. 74-80). Cinnamonteal.
- 9. Sharma, A. & Chunawala, S. (2013). *Marching towards inclusive education: Are we prepared for inclusive science education?*. In G. Nagarjuna, A. Jamakhandi and E. Sam (Eds.). Proceedings epiSTEME5: International Conference to Review

- Research on Science, Technology and Mathematics Education (pp. 314-320). Cinnamonteal.
- 10. Chunawala, S. & Natarajan C. (2012). *A Study of Policies Related to Science Education for Diversity in India*. In "Towards Effective Teaching and Meaningful Learning in Mathematics, Science and Technology", Proceedings of ISTE: International Conference on Mathematics, Science and Technology Education (pp. 130-141), South Africa, Oct, 2011.
- 11. Ara, F., Natarajan, C. & Chunawala, S. (2011). Students as Users and Designers: Product Evaluation and Redesign by Indian Middle School Students. In S. Chunawala and M. Kharatmal (Eds.). Proceedings of epiSTEME4: International Conference to Review Research on Science, Technology and Mathematics Education (pp. 95-100). India: Macmillan.
- 12. Sharma, A. & Chunawala S. (2011). *Teachers' Understanding of Nature of Science, and Their Views About the Primary School Environment Studies Curriculum.* In S. Chunawala and M. Kharatmal (Eds.). Proceedings of epiSTEME4: International Conference to Review Research on Science, Technology and Mathematics Education (pp. 75-80). India: Macmillan.
- 13. Shastri, V., Khunyakari, R., Chunawala, S. & Natarajan, C. (2011). Thinking Through Design: Teachers Explore a Design and Make Task. (2011). In S. Chunawala and M. Kharatmal (Eds.). Proceedings of epiSTEME4: International Conference to Review Research on Science, Technology and Mathematics Education (pp. 302-308). India: Macmillan.
- 14. Ara, F., Natarajan, C. & Chunawala S. (2010) *Naïve Designers: A study describing Indian middle school students' creative design solutions to a real world problem.* International Conference on "Designing for children'- with focus on 'play' and 'learn" at Industrial Design Centre, IIT, Mumbai, Feb 2-6, 2010. (Online) <a href="http://www.Designingforchildren.net/papers/farhat-ara-designingforchildren.pdf">http://www.Designingforchildren.net/papers/farhat-ara-designingforchildren.pdf</a>
- 15. Khunyakari, R., Mehrotra, S., Chunawala, S. & Natarajan, C. (2010) *Implementing D&T education in Indian middle schools: Lessons from trials*, International Conference on "Designing for children'- with focus on 'play' and 'learn" at Industrial Design Centre, IIT, Mumbai, Feb 2-6, 2010. (Published online only) <a href="http://www.designingforchildren.net/papers/ritesh-khunyakari">http://www.designingforchildren.net/papers/ritesh-khunyakari</a> designingforchildren.pdf
- 16. Ara, F., Chunawala, S. & Natarajan, C. (2009). *Moving from analysing to designing artefacts: studying middle school students' ideas about design and designers.* In K.Subramaniam and A. Mazumdar (Eds.). Proceedings of epiSTEME3: An International Conference to Review Research in Science, Technology and Mathematics Education, (pp. 94-100). Mumbai: Macmillan Publishers India Ltd.
- 17. Khunyakari, R., Mehrotra, S., Chunawala, S. & Natarajan, C. (2009). *Studying Indian middle school students' attitudes towards technology*. In K. Subramaniam and A.Mazumdar (Eds.). Proceedings of epiSTEME3: An International Conference to Review Research in Science, Technology and Mathematics Education, (pp. 81-87). Mumbai: Macmillan Publishers India Ltd.

- 18. Mehrotra, S., Khunyakari, R., Chunawala, S. & Natarajan, C. (2009). *Evidences of learning through collaboration in design and technology tasks in Indian classrooms*. In K. Subramaniam and A. Mazumdar (Eds.). Proceedings of epiSTEME3: An International Conference to Review Research in Science, Technology and Mathematics Education, (pp. 88-93). Mumbai: Macmillan Publishers India Ltd.
- 19. Mehrotra, S., Khunyakari, R., Natarajan, C. & Chunawala, S. (2007). *Using pictures and interviews to elicit Indian students' understanding of technology*; in J. R. Dakers, W. J. Dow and M. J. de Vries (eds), *Teaching and Learning Technological Literacy in the Classroom:* Pupils' Attitudes Towards Technology (PATT 18) Conference (pp. 152-161). Faculty of Education: University of Glasgow.
- 20. Khunyakari, R., Chunawala, S. & Natarajan, C. (2007). *Comparison of depictions by middle school students elicited in different contexts;* in J. R. Dakers, W. J. Dow and M. J. de Vries (Eds), Teaching and Learning Technological Literacy in the Classroom: Pupils' Attitudes Towards Technology (PATT 18) Conference (pp. 392-399). Faculty of Education: University of Glasgow.
- 21. Mehrotra, S., Khunyakari, R., Natarajan, C. & Chunawala, S. (2007). *Dialogues in formal communication: A study of students' talk in a D&T unit in India*. In Chitra Natarajan and Beena Choksi (Eds.). Proceedings of epiSTEME2: International conference to review research on Science, Technology and Mathematics Education (pp.73-78). India.
- 22. Khunyakari, R., Mehrotra, S., Chunawala, S. & Natarajan, C. (2007). *Cognition in action in Design and Technology units among middle school students*. In Chitra Natarajan and Beena Choksi (Eds.). Proceedings of epiSTEME2: International conference to review research on Science, Technology and Mathematics Education (pp. 126-131). India.
- 23. Khunyakari, R., Mehrotra, S., Natarajan, C. & Chunawala, S. (2006). *Designing design tasks for Indian classrooms*. In Marc J de Vries and Ilja Mottier (Eds.). Research for standards-based technology education (pp.20-34). Proceedings PATT-16, Baltimore.
- 24. Mehrotra, S., Khunyakari, R.P., Natarajan, C. & Chunawala, S. (2006) *Learning Technology through Collaboration: D&T unit for Boys and Girls in Different Indian Socio-cultural Contexts*. In Volk, Kenneth (Ed.) Articulating Technology Education in a Global Community. Reviewed Conference Proceedings of the International Conference on Technology Education in the Asia Pacific Region (pp. 280-290). The Hong Kong Polytechnic University.
- 25. Khunyakari, R. P., Mehrotra, S., Chunawala, S. & Natarajan, C. (2006) *Design and Technology Productions Among Middle School Students: An Indian Experience.* In Volk, Kenneth (Ed.) Articulating Technology Education in a Global Community. Reviewed Conference Proceedings of the International Conference on Technology Education in the Asia Pacific Region (pp. 63-73). The Hong Kong Polytechnic University.
- 26. Choksi, B., Chunawala, S. & Natarajan, C. (2006) *Technology as a School Subject in the Indian Context*, In Volk, Kenneth (Ed.) Articulating Technology Education in a Global Community. Reviewed Conference Proceedings of the International

- Conference on Technology Education in the Asia Pacific Region (pp. 374-384). The Hong Kong: Hong Kong Polytechnic University.
- 27. Chunawala, S. & Natarajan, C. (2004). *Placing technology education within the gender perspectives*, epiSTEME1 an international conference to review research on science education, Abstracts of Presentations (pp. 58-59). International Centre, Dona Paula, Goa.
- 28. Natarajan, C. & Chunawala, S. (2004). *Introducing design and technology in school education: legitimising multiple expressions in classrooms*, epiSTEME1 an international conference to review research on science education, Abstracts of Presentations (pp. 68-69). International Centre, Dona Paula, Goa.
- 29. Mehrotra, S., Khunyakari, R., Natarajan, C. & Chunawala, S. (2004). *Gendered communication in technology tasks: glimpses of group interactions*, epiSTEME1 an international conference to review research on science education, Abstracts of Presentations (pp. 120-121). International Centre, Dona Paula, Goa
- 30. Khunyakari, R., Mehrotra, S., Natarajan, C. and Chunawala, S. (2004). *Design as Drawings Analyzing drawings of Middle school students in Technology education tasks*, epiSTEME1 an international conference to review research on science education, Abstracts of presentations (pp. 62-63). International Centre, Dona Paula, Goa.
- 31. Natarajan, C., Chunawala, S. & Khunyakari, R. (2004). *Vidnyan Ashram, its work and HBCSE,* Comments in Dr. Shreenath Kalbag Memorial Seminar Report Smritisathi, Chronicle of Discussion.
- 32. Natarajan, C. & Chunawala, S. (2003). *Designing and teaching appropriate technological productions with their multi-expressive and multipurpose possibilities;* Background papers to the International Symposium on social production of knowledge through diversity of expressive modes, multiple literacies and bi (multi) lingual relationships.
- 33. Chunawala, S. & Natarajan, C. (2003). *Technology, education and issues of gender;* Background papers to the International Symposium on social production of knowledge through diversity of expressive modes, multiple literacies and bi(multi) lingual relationships.
- 34. Natarajan, C., Chunawala, S., Apte, S. & Ramadas, J. (2002). *Lessons for Teaching Botany: What Middle School Students Know about Plants;* in Rethinking Science and Technology Education To Meet the Demands of Future Generations in a Changing World. International Organization for Science and Technology Education (IOSTE) Symposium Proceedings (10th, Foz do Iguacu, Parana, Brazil, July 28-August 2, 2002). Volumes I [and] II.
- 35. Mehrotra, S. & Chunawala, S. (2001). *Teaching Map Skills at the Third Grade;* in S. C. Agarkar and V. D. Lale (Eds.). International Conference of Science, Technology and Mathematics Education for Human Development, Volume II. Goa, India.
- 36. Chunawala, S., Natarajan, C. & Ramadas, J. (1999). *Indian students' ideas about living and non-living; a cross-cultural study,* Proceedings Volume 1, IOSTE9,

- International Organization for Science and Technology Education (pp. 96-104). Durban: South Africa.
- 37. Mahajan, B.S., Shitut, S. & Chunawala, S. (1996). *Understanding Of Health Issues By Indian Students*: in Conference Proceedings of GASAT8, Gender and Science and Technology International Conference (pp. 589-591). Ahmedabad, India.
- 38. Kulkarni, V.G. & Chunawala, S. (1987). *The impact of science education on the role perception of socio-economically deprived first generation learners:* In Conference Proceedings of Science Technology Education and the Quality of Life International Conference (pp. 272-278). Kiel University: Federal Republic of Germany.

## **Books/ Booklets**

- 1. Chunawala, S. and Kharatmal, M. (Eds.). (2013). *The epiSTEME Reviews--Vol.4*. *Research Trends in Science, Technology and Mathematics Education*. India: Narosa.
- 2. Chunawala, S. and Kharatmal, M. (Eds.). (2011). International Conference to Review Research on Science, Technology and Mathematics Education, epiSTEME 4 Conference Proceedings. India: Macmillan.
- 3. Chunawala S. and Ladage S. (2007). "Mulyamapan va Sanshodhan" or "Assessment and Research", YCMOU.
- 4. Ramadas, J. and Chunawala, S. (Eds). (2006). *epiSTEME1: Research Trends in Science, Technology and Mathematics Education*, HBCSE, TIFR.
- 5. Chunawala, S. (2003). Gender and Science; an exhibition booklet, HBCSE, TIFR.
- 6. Chunawala, S. (2003). Stree Purush Bhed aani Vignyan; Pradarshan Pustika, HBCSE (in Marathi).
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- 1. Was a member of the focus group that wrote *Gender Issues in the Curriculum, Position Paper 3.2*, National Curriculum Framework, 2005, NCERT.
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