CURRICULUM VITAE

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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

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. I have also been involved in research in the area of 'understanding students' negotiation of socio-scientific issues (SSI)' and a doctoral student has received a Ph.D on this work providing 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 completed an international collaborative project titled Science Education and Diversity (SED) funded by the European Commission (2010-2013). 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.

I am involved in a large scale intervention project with schools called *"Vignyan Pratibha"* that deals with 3 large school systems in India, targeting around 1500 schools and was initiated following a directive from the central government, in early 2017. The project is an attempt to address the country's concerns about the grave paucity of high quality science and technology personal in India. The project is closely linked to inclusion and ideals of equitable quality science education and tries to take a long term view at the growing talent among secondary school students in India who could contribute to solving the country's problems.

The main idea is to ignite the spark of curiosity among students and nurture that spark through sustained out-of-school programmes. The core of the programme will be science and mathematics activity units conducted for Class 8, 9 and 10 students through science circles, which may be carried out after school hours or during, depending on the school and teacher. The units are led by teachers in each school.

Another project that I am involved with is a longitudinal sustained project with one school with the aim of collaborating with the teachers of a neighbouring Marathi medium school, to enhance students learning in environmental and general science. Broadly, we are following one batch of students and focussing on understanding the teaching-learning process; preparing instructional materials (worksheets, handbooks/activity manuals); generating simple and inexpensive experiments designed to nurture resourcefulness, and using appropriate teaching aids including audio-visual aids.

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: *C*o-author of a book in Marathi on *Assessment and Research for Science Education* 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
2. Introduction to Science Technology Society Environment Education
3. Readings in Science, Technology and Mathematics Research
4. The Foundations of Behavioural Research
5. Philosophy of Education
6. Cognitive Development
7. Cognitive Psychology
8. Psychology and Education
9. Sociological aspects of Education

10. Studies in Technology and Society
11. Readings in Gender and Science
12. Topics in Cognitive Science: Modularity of the Mind

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 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.

I have also been conducting courses on the topic of qualitative research and research writing in a Certificate Course in Research Methodology, organised by Somaiya College for Mumbai University College teachers and in an ICSSR sponsored Research Methodology Workshop. 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). These were titled *Collaborative Approach to Develop Science Teaching Methods Suitable for Addressing Diversity in Classroom.*

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. Aswathy Raveendran: **Conceptualizing Critical Science Education through Socioscientific Issues,** October, 2017, TIFR Deemed University

2. Farhat Ara: **Investigating about 'Design' Among Students, Teachers and Designers: Towards Design Education at Middle School.** April, 2013, TIFR Deemed University

3. 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

<u>Presently guiding three doctoral students of HBCSE.</u>

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)

5. Saurav Shome: **Project based learning: Development & Implementation of project & assessment** (Registered with TIFR Deemed University)

6. *Charudatta Navare :* **The Visual Rhetoric of Biology**(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 Doctoral thesis in education of the University of Pune, and Industrial Design Centre (IDC) of the Indian Institute of Technology (IIT), Mumbai, Curtin University, Australia, and University of Delhi.

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. Datt, S., & Chunawala, S. (2018). A comparison of problems at the grassroots level in India identified by adults and children: Implications for Design and Technology Education. Design and Technology Education: An International Journal 23(1), 10-25.
2. Sharma, A., Chari, D., & Chunawala, S. (2017, December). Exploring teachers' attitudes towards inclusive education in Indian context Using 'type of disability' lens. International Journal of Technology and Inclusive Education, 6(2), 1134- 1143.
3. Bhide, S., & Chunawala, S. (2017). Making a case for outdoor engagement in environmental studies at Indian schools. Conexão Ciência 12(2), 223-230.
4. 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

5. 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.
6. 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.*
7. 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)*
8. 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.
9. 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.*
10. 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
11. 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.
12. 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.
13. 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.
14. 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.
15. Chunawala, S. (1989). Sex-role stereotyping of occupations among teachers and students. *Journal of Education and Social Change, Vol. III* (3), 89-102.
16. 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. Muralidhar, A., Kapil, R., & Chunawala, S. (2018). Design and technology education's potential to address diversity. In S. Ladage and S. Narvekar (Eds.), Proceedings of epiSTEME7: Seventh international conference to review research on Science, TEchnology and Mathematics Education, HBCSE (pp. 49-57). India: CinnamonTeal.
2. Datt, S., & Chunawala, S. (2018). Children as film-makers. In S. Ladage and S. Narvekar (Eds.), Proceedings of epiSTEME7: Seventh international conference to review research on Science, TEchnology and Mathematics Education, HBCSE (pp. 17-25). India: CinnamonTeal.
3. Deshmukh, N. D., Bhide, S., Sonawane, V. C., Chunawala, S., & Ramadas, J. (2018). Experiences and learning from Participatory Action Research with a local school. In S. Ladage and S. Narvekar (Eds.), Proceedings of epiSTEME7: Seventh international

conference to review research on Science, TEchnology and Mathematics Education, HBCSE (pp. 204-213). India: CinnamonTeal.

4. 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 1st International Conference on Creativity and Cognition in Art and Design (ICCCAD 2017)* (pp. 278-286). New Delhi: Bloomsbury.
5. 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.
6. 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
7. 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
8. 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 21st Century Education* (pp. 73-86). Mumbai: K. J. Somaiya Comprehensive College of Education, Training and Research, Vidyavihar.
9. 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.
10. Raveendran, A. & Chunawala, S. (2013). *Towards an understanding of socio-scientific 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.
11. 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.
12. 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.
13. 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.

14. 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.
15. 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.
16. 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.
17. 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) http://www.Designingforchildren.net/papers/farhat-ara-designingforchildren.pdf
18. 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) http://www.designingforchildren.net/papers/ritesh-khunyakari designingforchildren.pdf
19. 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.
20. 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.
21. 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.
22. 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.
23. 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.

24. 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.

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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

33. 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.

34. 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.

35. 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.

36. 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.
37. 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.
38. 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.
39. 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.
40. 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.
41. 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). I*nternational 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.
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