

# Cluster Innovation Centre



...Evolving Senses  
Dissolving Boundaries...

संकुल  
नवप्रवर्तन  
केंद्र

Title: Dr.	First Name: Jyoti	Last Name: Sharma
Designation	Professor	
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Educational Qualifications		
Degree	Institute	Year
Ph.D	Department of Education, CIE, University of Delhi	2003
M.Phil	Department of Education, CIE, University of Delhi	1998
M.A (Mathematics)	Department of Mathematics, University of Delhi	1993
M.Ed	Department of Education, CIE, University of Delhi	1995
B.Ed	Department of Education, CIE, University of Delhi	1994
BA(H) Mathematics	Indraprastha College for women, University of Delhi	1991
Career Profile		
Designation	Institute	Time Duration
Associate Professor	Cluster Innovation Centre, University of Delhi	March 2015 onwards
Assistant Professor	Shyama Prasad Mukherji College, University of Delhi	2008-2015
Adjunct Faculty	National Institute of Advanced Studies, Bangalore	2010-2014
Visiting Fellow	CSEC, University of Delhi	2013-14



<b>Areas of Interest/Specialization</b>
Mathematics Education, Pedagogy and Assessment, Mathematics Creativity, Education for Gifted Students
<b>Subjects/Courses taught</b>
M.Sc. (Mathematics Education) M.Ed. B.Ed. B.El.Ed. Papers taught: Art of teaching Mathematics, Research Investigation in Mathematics Education, Learning ways of Mathematical Writing, Perspectives in Mathematics Education, Statistics in Educational Research
<b>Research Guidance</b>
Ph.D : 05 ongoing M.Sc (Mathematics Education) Research Dissertations Member, Advisory committee for Ph.D.
<b>Administrative Responsibilities (last five years)</b>
Joint Director, Cluster Innovation Centre, University of Delhi (October 2022-continuing) Joint Director, Institute of Lifelong Learning, University of Delhi (Nov 2020 –January 2023) Program Coordinator, M.Sc. (Mathematics Education) Convener and Member, Admission Committee, CIC Convener, Purchase Committee, CIC (2020-21) Convener, Purchase Committee, ILLL (2021-onwards) Convener, Admission Committee, CIC (2020-21) Member, MME Course Re-structure Committee Member, Admission Committee, CIC (2014-19) Convener, Timetable Committee, CIC (2018-21)
<b>Members, National Advisory/Scientific Bodies (last 5 years)</b>
Member, Thematic Group- Capacity Development, Science, Technology, and Innovation Policy, Formation Consultation Group, Government of India, 2020 Convener, Committee of Courses-Mathematics, CBSE, 2019- continuing Convener, Committee on Two level Mathematics at Sr. Secondary level, CBSE, 2019; Member, Accreditation Framework for Training Program CBSE, 2022 Member, Discussion group on analyzing factors that create phobia/fear of Mathematics among students (setup by MHRD, Govt. of India) NCERT, 2019 Member, Consultation Group, The Pradhan Mantri Innovative Learning Program MHRD, Govt. of India, 2019-20 Delegate, Representing India, World Council for Gifted and Talented Member, National Education Policy 2020 Implementation Committee, University of Delhi
<b>Research Projects (National)</b>

PI, Effective Education Vertical, Delhi Research Implementation and Innovation (DRIIV), Delhi Knowledge Cluster, Initiative of O/PSA (2021- 23)

Establishing Process Based Identification and Mentoring Practices for Potentially Gifted Children in Science and Mathematics funded by O/PSA, DST (2014-19) (Grant: 160 lac)

DU-Innovation Project titled, Translating Lilavati of Bhaskara in the realm of present Mathematics Curriculum funded by University of Delhi (2015-16). (Grant: 4.5 lac)

Project Concept Map as Pedagogy tool for teaching Calculus, under University of Delhi R&D grant (2014-15) (Grant: 1.5 lac)

Modeling Metro Feeder Bus Service in University of Delhi, North Campus – Feasibility and Financial Viability (2013-14) funded by University of Delhi (Grant: 5.5 lac).

Interdisciplinary Innovative project on Consumer behavior and eco-friendly goods funded by University of Delhi (2012-13) (Grant: 10 lac).

National level project on Identification of gifted children in Science and Mathematics, funded by O/PSA, DST (2010-14) (Grant: 200 lac)

Preparing Reflective Mathematics Teachers: Pre service Initiative, funded by UGC (2010-12) (Grant: 0.8 lac)

#### Research Project (International)

Restoring women's futures through personal narrative, visual representations, metaphor and myth- SSHRC Grant

Educators' Perceptions of Creativity in Mathematics: A Cross-Cultural Analysis Using a Mixed-Methods Approach (Collaborative project with Western Connecticut State University, USA)

Establishing reliability and validity of MCT (Collaborative project with Western Connecticut State University, USA)

Adults with high ability/giftedness: International research group on high ability learners

#### Publications (Research Articles and Chapters in books)

1. Educators' perceptions of creativity in mathematics: A cross-cultural analysis (Manuscript submitted for review)
2. University based mentoring program for school going gifted students, manuscript accepted and under publication, (G&T)
3. Roadmap for humanities & social science in stem higher education, (Chapter in edited book, under publication, Springer, India)

4. Construction of Mathematics Creativity Test, manuscript ready for submission
5. Sharma, J. (2016). Developing Context Specific Processes to identify & mentor gifted children in India. In International Education & Research Journal.
6. Sharma, J. (2018). Inclusion for Gifted: Possibilities and Challenges. In edited book Psychological and Sociological Perspectives in Diversity and Inclusion. Kanishka Publishers & Distributors. India.
7. Sharma, J. & Tyagi, P. (2014). Revival and Innovations in Mathematics Pedagogy: A case study. International Journal of Innovative Trends in Engineering. Foundation of Modern Research, Bhopal, India.
8. Sharma, J. (2020). Support for Gifted Students in New Education Policy: A Close Look. WorldTalentWeb Newsletter. World Giftedness Centre. Vol (8), 16-20.
9. Trig-Disc: An innovative device for determination of values of trigonometric functions with single measurement. International journal of innovation and scientific research. Vol (27), pp. 216-224.
10. Sharma, J., Biswal, B., Tyagi, P. & Bagai, S. (2017). Exploring possibilities for gifted students: A case study from India. In ECHA News (European Council of High Ability).
11. Sharma, J. (2017). Assessing students' understanding of pre-calculus concepts. International Journal of Research, Delhi, India.
12. Giftedness: Concepts and current status in India, Cover story on Gifted Education Project in Educational Magazine, *Brainfeed* online version at "brianfeedmagazine.com" Page 22-23 November 2019.
13. Sharma, J. (2012) Gifted Disadvantage in Education Safety Net: A Reality Check, (Journal of Indian Education, NCERT).
14. Sharma, J. (2018). Inclusion for gifted learners: Possibilities and challenges. In the edited book titled Psychological and Sociological Perspectives in Diversity and Inclusion: An anthology for researcher and practitioners. Kanishka Publications, ISBN 9788184578416.
15. Sharma, J. & Bapat, K. (2015). Mentoring young minds: Responding the Needs of Gifted Children. In International Journal of Science and Research.
16. Kapur, V. and Sharma, J. (2014). LINC conference 2013 proceedings. Technology, Education and Emerging Economics. Learning International Networks Consortium, MIT Open Learning.
17. Vashishth, V. Sangeeta. Sharma, J. & Tyagi, P. (2016). Designing of a Basic

Mathematical Kit to Assist Mathematical Skill Development among children with Autism. International Journal of Advanced Research in Education & Technology Vol. 3, Issue 3 ( July-Sept 2016) pp.153-158.

18. Sharma, Jyoti. (2014). Pre-service teacher education reforms in India and Pakistan: challenges and possibilities. International Journal of Research - GRANTHAALAYAH.
19. Sharma, Jyoti. (2017). Effect of Mathematics Learning on the development of Mathematics Creativity. International Journal of Research - GRANTHAALAYAH.
20. Sharma, J. (2012) Where are they? Gifted disadvantaged children in India, *Gifted Education International, Vol (28)*.
21. Sharma, J. and Mehta, R. "Emerging pedagogic practices in Mathematics in Saxena, (Ed) Contemporary Trends in Education: A handbook for educators. Pearson Publishers.
22. Sharma, J. (2010). Nurturing young mathematicians: Challenges and concerns, in Journal Gifted and Talented International.
23. Maitra and Sharma (2009). Non - formal curriculum for out of school advanced learners in Gifted Education International, AB Academic Publishers, Bicester, Oxon, UK.
24. Sharma, J. (2006). Integrated Approach to Mathematics Teaching in Edutrack, Neelkamal Publication India.
25. Sharma, J. (2006). Why Students fail in Mathematics? In Edutrack, Neelkamal Publication India.
26. Sharma, J. (2004). Nurturing Talents in Mathematics in Primary Teacher, NCERT India,
27. Sharma, J. (2004) Nature of Mathematics: Its relevance in Mathematics Curriculum in Edutrack, Neelkamal Publication India.
29. Sharma, J (2000). Error Patterns in Mathematics published in M a i t r a , K ( E d ) Giftedness in Action: Theory and Practice, Kanishka Publishers, Distributors, Delhi, India.
30. Sharma, J and Maitra, K. (1999) Mathematical Giftedness: Exploring the conceptual Framework, (translated in Spanish) in Spanish International Journal on Gifted Education.

<b>Books (Edited/Co-authored)</b>
<p>1) Building Mathematical Ability (Co-Author) S. Chand Publishing (2013)</p> <p>2) Handbook of Gifted Education: Theories and Practices Kanishka Publishing, Delhi, India (2020)</p>
<b>Invited Talks/Conferences/Academic Programs (Last 5 years)</b>
<p>International Workshop On Adoption Of The Gender Green Teacher Programme, NIOS &amp; Commonwealth of Learning, 27<sup>th</sup> June 2023.</p> <p>Women and mathematics education, Shyama Prasad Mukherji College, University of Delhi. 10-06-2023</p> <p>Capacity-Building Pathways for Sustainability Competencies in Teacher Education program: Proposing a Developmental Framework”, at the conference "Applying Education in a Complex World" in collaboration with Sheridan College, Toronto, Canada and Routledge, April 26-28, 2023.</p> <p>Socio-emotional Needs of Gifted Learners in Inclusive Education, Lakshmi Bai College, University of Delhi, 10-06-2023</p> <p>Panellist-speaker for an in-person program on <i>Conversations on “U.S. &amp; India: Actions for Clean Air and Better Health”</i>, Lung Care Foundation, India, 01-06-2023</p> <p>Gifted learners in inclusive education, Lakshmi Bai College, University of Delhi, 13-06-2022</p> <p>Capacity-Building Pathways for Sustainability Competencies in Teacher Education program: Proposing a Developmental Framework”, at the conference "Applying Education in a Complex World" in collaboration with Sheridan College, Toronto, Canada and Routledge, April 26-28, 2023.</p> <p>Program for Mathematics Mentors under Ministry of Education &amp; Skill Development, Government of Bhutan, 2-7<sup>th</sup> April 2023 Resource Person, Workshop on Review and development of Math teaching -leaning material for Math lab, NCERT, 17- 02-2023</p> <p>Invited speaker, Roundtable discussion on National Curriculum Framework for School Education, NIEPA, 17<sup>th</sup> may 2023</p> <p>How to Cater to Slow and Advanced learners/Personalised-teaching learning" on January 28, 2021 from 4:00-6:00 pm under Faculty Development Programme on the topic titled: 'Student-centric pedagogic Methods at JDM &amp; Hansraj College, University of Delhi</p>

Expert in Round table discussion on National Seminar (Under the aegis of IASE MHRD INDIA) Inclusive Pedagogy Access and Beyond, February 03, 2017; 2:30- 4:30 pm, Faculty of Education

Subject Expert, Roadmap for the achievement of Universal Foundational Literacy and Numeracy, NCERT, on 25<sup>th</sup> September 2020

Subject Expert, Seminar-Cum-National Dialogue on Education, Skills and Employment & Access, Equality and Quality in Higher Education Under the Scheme of IMPRESS, ICSSR Education, 30<sup>th</sup> November 2018.

Resource Person, Workshop on Project Based Learning at Undergraduate level, Department of Mathematics at Hansraj College, University of Delhi, 9<sup>th</sup> February 2021.

Paper presented in ERAS-APERA International Conference at National Institute of Education, University of Education on 12-14 November 2018.

Diversified model of identification of gifted students: An exploratory study in India, 22<sup>nd</sup> Biennial World Conference at the University of New South Wales in Sydney, Australia. 22<sup>nd</sup> July 2017.

Presented invited talk on Gifted Education in India: Four-Quadrant Model of Identification and Mentoring Gifted Students in an Inclusive Classroom, ICIE Talk Series, 6<sup>th</sup> February 2021.

Keynote speaker on the session Gifted Children in for School Education at Web-series organized by Subject Expert Group (SEG) of the Unnat Bharat Abhiyan (UBA), a flagship program of the Ministry of Education, Government of India on 14<sup>th</sup> February 2021.

Resource Person and Coordinator, In-service Teachers' Training Program for Pathways Schools under theme Gifted Learners in My Classroom: Understanding salient traits of 'Gifted Learners' on May25-26, 2019.

Invited session on "Gifted Children: Issues, Challenges and Role of Counselling" under Enrichment Programme for Teacher Counsellors in Guidance and Counselling, Department of Educational Psychology & Foundations of Education, September 26, 2020.

Resource Person and Coordinator, National level Training in GeoGebra software for PGT(Maths), Navodaya Schools, 29<sup>th</sup> July- 10<sup>th</sup> August 2020.

Coordinator, Weekly Web-series on "Decoding New Education Policy-2020: Discussions on Future Road Map" at Cluster Innovation Centre, University of Delhi, 20 August -15 November 2020.

Coordinator, Seminar for Parents, *s My Child Gifted?* on 28th October 2017 under Gifted Education Project, O/PSA.

Invited Speaker on session Igniting the minds of our students in Math, Kalmadi group of educational Institutes, 5th April 2019.

Resource Person, Session, Identifying the needs of Gifted children in Capacity Building Program for Math Master Trainers, DAV Centre of Academic Excellence, 23<sup>rd</sup> April 2018.

Resource Person, Session on Pedagogical Innovations in an Evolving World, Faculty Development Program organized by SPM college, University of Delhi, 24<sup>th</sup> September 2018.

Keynote Speaker, National Science Day, Indraprastha College for Women, University of Delhi, 28<sup>th</sup> February 2019.

Members of Professional Bodies

Member, World Education Research Association

Member, All India Association for Educational Research Member,

Member, The Association of Mathematics Teacher of India NCTM

Member, Ramanujan Mathematics Society



03-07-2023

Signature  
(Jyoti Sharma)