

Curriculum Vitae

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Professional Summary

Dr. Shashi Kant Gupta is a seasoned educator and engineer with a strong foundation in Electrical Engineering (B.E. and MTech. from NIT Bhopal) and a Ph.D. in Education, specializing in student assessment, from Newcastle University, UK. He began his career at BHEL Bhopal, where he worked for 9 years as a Power Transformer Designer and was honoured with a National Award for his contributions to India's first HVDC transmission line. With over 27 years of experience at NITTTR Bhopal, Dr. Gupta made significant contributions to curriculum development and student assessment, particularly in the states of Gujarat and Maharashtra. In 2012, he played a key role in coordinating the development of India's first Outcome-Based Curriculum for engineering diploma programs at Gujarat Technological University (GTU). Dr. Gupta has also been a core faculty member for about 350 training programs, focusing on curriculum development, teaching methodologies, and accreditation. From 2018 to 2021, he led the National Resource Centre for Student Assessment and Evaluation, where he developed MOOCs to train faculty members across India. After retiring in 2021, Dr. Gupta continues to contribute to the education sector through consultancy services and has co-authored a book on Outcome-Based Curriculum.

Educational Qualifications

Programme Title/Degree	Institute/University	Year
Ph.D. (Education)	University of Newcastle Upon Tyne, United Kingdom Awarded with appreciation	2006
Post Graduate Certificate Courses in Educational Research and Student Assessment (Total 5 Courses, each of one trimester duration)	University of Newcastle Upon Tyne, United Kingdom	2002
Certificate Programme in Advances in Education (8 weeks duration)	University of Northumbria, Newcastle Upon Tyne, UK	1999
MTech. (Heavy Electrical Equipment design and Manufacturing)	NIT Bhopal (Maulana Azad National Institute of Technology, Bhopal) Completed as a parttime student with 81% Marks.	1997
Graduate Aptitude Test in Engineering (GATE)	Ministry of Education, GOI with 81.35 Percentile	1984
B.E. Electrical	NIT Bhopal (Maulana Azad National Institute of Technology Bhopal) with 80% Marks.	1984
Higher Secondary Certificate Examination (Physics, Chemistry, Math, Higher English, Hindi)	Madhya Pradesh Board of Secondary Education with 79% Marks.	1980

Professional Experience

Sl. No.	Organisation	Positions Held	Responsibilities
1.	Bharat Heavy Electricals Limited (BHEL) Bhopal (A Public Sector Undertaking of GOI)	Engineer Trainee (Aug 1984 to June 1985) Design Engineer (July 1985 to May 1989) Senior Design Engineer (from June 1989 to May 1993)	<ul style="list-style-type: none"> a) Design and Development of Power Transformers up to 400 kV class and 315 MVA rating. b) Design and Development of Shunt and Smoothing Reactors up to 400 kV class. c) Design and Development of Converter Transformers up to 315 MVA rating for high-voltage DC transmission lines. d) Research and Development Initiatives focused on enhancing the quality of transformers. e) Supporting the Manufacturing and Sales Departments in their operational activities. f) Training Junior Engineers and Technicians to enhance their skills and knowledge.
2.	National Institute of Technical Teacher's Training and Research, Bhopal (Under Ministry of Education, GOI)	Associate Professor (May 1993 to Nov 2001) Professor (Nov 2001 to August 2021) Coordinator for State of Gujarat (Aug 2007 to Aug 2021)	<ul style="list-style-type: none"> a) Teaching M. Tech in Education Courses, including Student Assessment, Educational Research, and Evaluation of Educational Programs and Projects. b) Guiding Ph.D. Scholars and M. Tech. (Ed) Students in their research, having supervised two Ph.D. theses and six M. Tech. (Ed) dissertations. c) Providing Consultancy to Technical Universities in areas such as Curriculum Development, Total Quality Management, and Examination Reforms. d) Training Faculty of Engineering Colleges and Higher Educational Institutes in various aspects of pedagogy and electrical engineering. e) Liaising with the Department of Technical Education, Government of Gujarat, and Gujarat Technical University to undertake educational projects aimed at improving the quality of education and organizing faculty training in emerging technologies and pedagogy. f) Performing various administrative duties for the effective management of the institute.
3.	Adjunct Faculty in a Reputed University of Bhopal & Freelance Consultant	Professor and Educational Consultant. (Since Sep 2021 to till date)	Providing training and consultancy to technical and higher educational institutes related to Outcome Based Education and examination reforms in the light of NEP 2020.

Short-term Training programmes (STTPs)

Conducted approximately 350 short-term training programs over the past 30 years, across various states in India and internationally, in collaboration with the Ministry of External Affairs, Government of India, Gotland University in Sweden, and the Civil Service Commission in Manila.

1. Developing Outcome-Based, Competency-Focused Curriculum (OBCFC).
2. Designing High-Quality Assessment Questions.
3. Assessing Social and Practical Skills.
4. Creating Rubrics and Question Banks.
5. Implementing Advanced Teaching Methods.
6. Conducting Educational Research.
7. Fostering Professional Development.
8. Promoting Lifelong Learning Skills.
9. Project-Based and Problem-Based Learning.
10. Enhancing Soft Skills.
11. Developing Resource Materials for Self-Directed Learning.
12. Induction Training for Newly Recruited Teachers.
13. Implementing Total Quality Management in Education.
14. Preparing for ISO Certification.
15. Preparing for NBA Accreditation.
16. Implementing NEP 2020 (National Education Policy 2020).
17. Establishing Autonomy in Educational Institutions.
18. Designing Power Transformers and Reactors.
19. Advances in Wind and Solar Energy Technology.

Major Educational Projects Undertaken as Coordinator/Co-coordinator

(A) Curriculum Development

1. Development of Outcome-Based Curriculum for B.Pharm., M.Pharm., and B.Sc. Nursing programs at CVM University, Anand, Gujarat (2022-23).
2. Development of Outcome-Based Competency-Focused Curriculum for 18 different programs under the Maharashtra Board of Technical Education (2016-2018).
3. Development of Outcome-Based Competency-Focused Curriculum for 24 different programs at Gujarat Technological University (2012-2015).
4. Development of Competency-Focused Curriculum for 3 programs at Rajeev Gandhi Prodyogiki Vishwavidyalaya, Bhopal (Government Technical University of Madhya Pradesh) in 2008-2009.
5. Development of Competency-Based Continuing Education Certificate Programs in 12 emerging areas for Jabalpur Kala Niketan Polytechnic College (2003-2004).

(B) Student Assessment

1. Established and Coordinated the National Resource Centre for the Ministry of Education at NITTTR Bhopal from 2018 to 2021. Developed two MOOCs for the SWAYAM platform of the Ministry of Education, training approximately 5,000 faculty members.
2. Coordinated the National Testing Service for Technical Education at NITTTR Bhopal from 1993 to 2009. NTS had a question bank of 35,000 four-options multiple-choice questions, which were pretested and used in various engineering examinations.
3. Coordinated Selection Tests for Professional Degree and Diploma Programs in the state of Uttar Pradesh from 1993 to 1999. Responsibilities included designing question papers, editing,

printing, and distributing the papers, data entry, result preparation, and result moderation before declaration. Over 100,000 students participated in these exams every year.

4. Coordinated Selection Tests for Professional Diploma Programs in the state of Bihar from 1997 to 1998. Responsibilities included designing question papers, editing, printing and distributing the papers, data entry, result preparation, and result moderation before declaration. More than 60,000 students participated.
5. Designed Four-Options Multiple-Choice Question Papers for the selection of engineers for various agencies, including the Railway Recruitment Board, NHPC, the Professional Entrance Examination Board of Madhya Pradesh, and the selection of instructors for ITIs in 35 trades in Uttar Pradesh (1993 to 2005).
6. Established and Developed Examination Cells in 16 government polytechnics across Maharashtra to facilitate their autonomy (1997 to 2005).
7. Developed a Comprehensive Scheme of Assessment with rubrics for all courses across various diploma programs in the state of Gujarat (1993 to 1999).

(C) Total Quality Management

1. Established ISO system in the NITTTR Bhopal, coordinated development of procedure and quality manuals for different activities, worked as Lead Quality Auditor and Management Representative for the institute and coordinated ISO quality audit for ISO certification three times (2002 to 2009).
2. Helped All Government Engineering Colleges and Polytechnics in preparing for NBA accreditation in state of Gujarat by training faculty members, helping them in preparing SARs and by conducting mock audits (2011 to 2019).
3. Co-ordinated Formative Evaluation of world bank assisted project (phase 1) for capacity enhancement and quality improvement in technical education (1997 to 1998).
4. Co-ordinated evaluation of implementation of world bank assisted project for improvement in Technical Education in Jammu and Kashmir and North Eastern States (2004 to 2006).

(D) MOOCs Development

1. Coordinated the Development of MOOCs on "[Professional Ethics and Environmental Sustainability](#)" for the National Initiative for Technical Teachers' Training (NITTT) of AICTE and the Ministry of Education in 2019. The course includes approximately 20 video modules and 150 pages of content. Over 10,000 faculty members have been trained through this module, and it continues to be in use.
 2. Coordinated the Development of MOOCs on "[Student Assessment in the Cognitive Domain](#)" for the Ministry of Education under the National Resource Centre for Student Assessment in 2018. The course includes around 12 video modules and 100 pages of content. Approximately 4,000 faculty members have been trained using this MOOC, which remains actively used.
 3. Coordinated the Development of MOOCs on "[Assessment of Practical and Social Skills](#)" for the Ministry of Education under the National Resource Centre for Student Assessment in 2020. The course includes about 10 video modules and 100 pages of content. Around 3,000 faculty members have been trained through this MOOC, and it continues to be utilized.
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Other Publications

1. Co-Authored book on ***“Outcome Based Curriculum for Engineering Education” in 2022 Published by Printice Hall of India.***
2. Co-Authored **Mentors Manual** for mentors of National Initiative for Technical Teacher’s Training Published by AICTE.
3. Co-Authored **Industrial Training Module** for National Initiative for Technical Teacher’s Training published by AICTE.
4. Co-Coordinated Development of **Lab manuals with assessment rubrics** in about 80 courses for outcome-based education published by MSBTE (2018-19).
5. Co-Coordinated development of **Lab Manuals with assessment rubrics** in about 100 courses for Outcome Based Education for GTU (2014-15).
6. Co-Cordinated development of **model question papers** for about 200 courses for outcome-based education, published by MSBTE (2018-19).
7. Co-Cordinated development of **model question papers** for about 250 courses for outcome-based education, published by GTU (2018-19).
8. Co-Authored **Module on Student Assessment for faculty of NITs** in 1999 (at that time they were Regional Engineering Colleges) published by NITTTR Bhopal.
9. Co-Authored **Books on “Baisc Electrical Engineering” and “Engineering Mathematics”** suitable for self-directed learning of students studying in distance education mode in state of Gujarat (1995 to 1998) published by Board of Technical Education state of Gujarat.
10. Co-Authored Module on **“Induction Training”** published by NITTTR Bhopal (2005) published by NITTTR Bhopal.
11. Developed Learning Resource Material for self-directed learning for skill development in the area of **“Horticulture’ as part of Vocational Education project of Govt. of India** (2003 to 2004) published by Ministry of Education.
12. Coordinated Development of Learning Resource Material for CPSC Manila Training Programme on **“Competency Based Learning and Assessment”** published by CPSC Manila (1999)
13. Co-Authored Continuing Education Module on **“Design of Power Transformers”** published by NITTTR Bhopal (1995)
14. Coordinated Learning Resource Material Development on **“Switch Gear and Relays for Power Distribution and Control”** in collaboration of NITTTR with L and T (Pune Training Centre).

International/National Conferences and Symposiums

1. Co-convenor for organisation of India’s first international conference purely dedicated to ***“Wind Energy Trends and Issues”*** in January 2006. Conference was fully funded by Wind Turbine Manufacturers.
 2. Co-convenor for organisation of India’s second international conference purely dedicated to ***“Wind Energy Trends and Issues”*** in November 2011. Conference was fully funded by Wind Turbine Manufacturers.
 3. Co-convenor for organization of National Conference on ***“Aptitude Tests”*** in collaboration with Professional Entrance Examination Board of MP in 1998 at NITTTR Bhopal.
 4. Co-Convenor for organisation of National Symposium on ***“Examination Reforms in Technical Education”*** in 1996 and 1998 at NITTR Bhopal.
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Publications and Presentations of Research Papers

Published and presented about 25 research papers in different international/national journals and conferences.

Major Awards

1. **Government of UK scholarship for pursuing Ph.D.** at University of Newcastle (total 50000 British Pounds) in 1999.
 2. **Government of India's national award for research and development** for developing India's first Convertor Transformer and Smoothing reactor for India's first High Voltage Direct Current transmission line for transferring 100 MVA DC power at plus-minus 100 KV DC voltage.
 3. **National Merit Cum Means Scholarship** for Undergraduate Education (1200 Rs per year from 1979 to 1984).
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