

Robots In the Classroom

Teaching the Future Today



Jayanta Mete *Editor*

 DeepScience

Robots In the Classroom: Teaching the Future Today

Jayanta Mete

Department of Education, University of Kalyani, West
Bengal, India



DeepScience

Published, marketed, and distributed by:

Deep Science Publishing, 2025
USA | UK | India | Turkey
Reg. No. MH-33-0523625
www.deepscienceresearch.com
editor@deepscienceresearch.com
WhatsApp: +91 7977171947

ISBN: 978-93-7185-924-0

E-ISBN: 978-93-7185-612-6

<https://doi.org/10.70593/978-93-7185-612-6>

Copyright © Jayanta Mete, 2025.

Citation: Mete, J. (2025). *Robots In the Classroom: Teaching the Future Today*. Deep Science Publishing.
<https://doi.org/10.70593/978-93-7185-612-6>

This book is published online under a fully open access program and is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0). This open access license allows third parties to copy and redistribute the material in any medium or format, provided that proper attribution is given to the author(s) and the published source. The publishers, authors, and editors are not responsible for errors or omissions, or for any consequences arising from the application of the information presented in this book, and make no warranty, express or implied, regarding the content of this publication. Although the publisher, authors, and editors have made every effort to ensure that the content is not misleading or false, they do not represent or warrant that the information-particularly regarding verification by third parties-has been verified. The publisher is neutral with regard to jurisdictional claims in published maps and institutional affiliations. The authors and publishers have made every effort to contact all copyright holders of the material reproduced in this publication and apologize to anyone we may have been unable to reach. If any copyright material has not been acknowledged, please write to us so we can correct it in a future reprint.

CONTENT

CHAPTER 1

EMOTIONAL INTELLIGENCE IN EDUCATIONAL ROBOTS.....1

Prof. (Dr.) Ram Mehar

CHAPTER 2

**AI TUTORS AND HUMAN TEACHERS: SYNERGIZING
STRENGTHS FOR TRANSFORMATIVE EDUCATION.....16**

Paramjit Singh

CHAPTER 3

**ETHICS IN THE CLASSROOM: DISCUSSING ROBOT RIGHTS
AND RESPONSIBILITIES.....26**

**Sonu Rajak, Md Jamshed Alam, Syed Razaur Rahman, Md Nadim & Uttam
Kumar**

CHAPTER 4

**THE GREEN CLASSROOM: ECO-ROBOTS TEACHING
SUSTAINABILITY.....40**

Sreelogna Dutta Banerjee & Jayanta Mete

CHAPTER 5

**BEYOND THE SCREEN: INTERACTIVE ROBOTICS FOR EARLY
CHILDHOOD EDUCATION.....64**

Prof. (Dr.) Deepa Sikand Kauts & Ms Rajbir Kaur

CHAPTER 6

**EMPATHETIC MACHINES: CULTIVATING EMOTIONAL
INTELLIGENCE IN EDUCATIONAL ROBOTS.....73**

Dr. Laisom Sharmeswar Singh & Ngangbam Devkanta Singh

CHAPTER 7

**EMPATHETIC MACHINES: UNDERSTANDING AND
RESPONDING TO STUDENT EMOTIONS IN ROBOT-ASSISTED
LEARNING.....89**

Manoj Kumar Sahu

CHAPTER 8

**SIGNIFICANCE AND IMPORTANCE OF ROBOTICS IN
EDUCATION.....109**

Ankita Mukhopadhyay

CHAPTER 9

**CO TEACHING WITH ROBOTS, A NEW PEDAGOGICAL
PARTNERSHIP.....121**

Muthu Lakshmi S, Padma Raj & Radha Palaniswamy

CHAPTER 10

**ENHANCING ACCOUNTING PEDAGOGY: AI-BASED ROBOTIC
TUTORS AND THEIR ADAPTATION TO STUDENT NEEDS.....139**

Dr. Amrendra Kumar

CHAPTER 11

TEACHER TRAINING FOR INCLUSIVE ROBOTICS INTEGRATIO.148

Dr. Nandini N.

CHAPTER 12

**EMOTIONAL INTELLIGENCE AND EDUCATIONAL ROBOTICS
FOR LEARNING.....155**

Dr. Qaisur Rahman

CHAPTER 13

**CO-TEACHING WITH ROBOTS: A NEW PEDAGOGICAL
PARTNERSHIP.....171**

Aarushi Mishra

CHAPTER 14

**THE ROLE OF ARTIFICIAL INTELLIGENCE IN SHAPING
FUTURE EDUCATORS.....177**

Gouri Mondal & Dr. Sagufta Sahin

CHAPTER 15

**INTEGRATION OF TECHNOLOGY IN THE SUSTAINABILITY OF
EDUCATION.....189**

Dr. Shrutee Kanwar & Ms. Bhavya Aggarwal

CHAPTER 16

**EDUCATION FOR SUSTAINABILITY- CHALLENGES AND
OPPORTUNITIES.....201**

Dr. Shrutee Kanwar & Ms. Archana Giri

CHAPTER 17

**AI-POWERED TUTORS: PERSONALIZED LEARNING THROUGH
ROBOTICS.....212**

Dr. Shrutee Kanwar

CHAPTER 18

**GREEN CLASSROOM WITH ECO-ROBOTS TEACHING IN
INDIA.....224**

Dr. Rimmi Datta & Prof. Jayanta Mete

ABOUT THE CONTRIBUTORS

Name	Designation	Department/Institution/University	Location
Prof. (Dr.) Ram Mehar	Professor	Department of Education, CDOE, Panjab University	Chandigarh, India
Paramjit Singh	Assistant Professor	Khalsa College of Education	Ranjit Avenue, Amritsar, India
Sonu Rajak	Assistant Professor	MANUU College of Teacher Education	Darbhanga, Bihar, India
Md Jamshed Alam	Ph.D. Scholar, JRF	MANUU College of Teacher Education	Darbhanga, Bihar, India
Syed Razaur Rahman	Ph.D. Scholar, JRF	MANUU College of Teacher Education	Darbhanga, Bihar, India
Md Nadim	Research Scholar (Ph.D. in Education)	Department of Education, LNMU	Darbhanga, Bihar, India
Uttam Kumar	Research Scholar (M.Ed)	MANUU College of Teacher Education	Darbhanga, Bihar, India
Sreelogna Dutta Banerjee	Research Scholar	Department of Education, University of Kalyani	Kalyani, West Bengal, India
Prof. Jayanta Mete	Former Professor & Dean	Department of Education, University of Kalyani,	Kalyani, West Bengal, India
Prof. (Dr.) Deepa Sikand Kauts	Head, Department of Education	Guru Nanak Dev University	Amritsar, Punjab, India
Ms Rajbir Kaur	Research Scholar	Department of Education, Guru Nanak Dev University,	Amritsar, Punjab, India
Dr. Laisom Sharmeswar Singh	Assistant Professor	Department of Teacher Education, Manipur University	Manipur, India
Ngangbam Devkanta Singh	Research Scholar	Department of Teacher Education, Manipur University	Manipur, India
Manoj Kumar Sahu	Librarian	Anchal College	Padampur, Dist-Bargarh, Odisha, India

Ankita Mukhopadhyay	Research Scholar	Department of Education, Jadavpur University,	Kolkata, West Bengal, India
Muthu Lakshmi S	PG Student	Department of Biotechnology, Dr. N.G.P Arts and Science College	Coimbatore, Tamil Nadu, India
Padma Raj	PG Student	Department of Biotechnology	Dr. N.G.P Arts and Science College, Coimbatore, Tamil Nadu
Radha Palaniswamy	Associate Professor	Department of Biotechnology, Dr. N.G.P Arts and Science College,	Coimbatore, Tamil Nadu, India
Dr. Amrendra Kumar	Research Fellow	B.R.A. Bihar University	Muzaffarpur, Bihar, India
Dr. Nandini N.	Guest Faculty	Department of Education, Bangalore University,	Bangalore, India
Dr. Qaisur Rahman	Assistant Professor	Deo College Of Education, Vinoba Bhave University,	Hazaribag, Jharkhand, india
Aarushi Mishra	Research Scholar	Department of Education, University of Delhi,	New Delhi, India
Gouri Mondal	Ph.D. Scholar	Department of Education, University of Gour Banga,	Malda, West Bengal, India
Dr. Sagufta Sahin	Assistant Professor	Department of Education, University of Gour Banga,	Malda, West Bengal, India
Dr. Shrutee Kanwar	Assistant Professor	Department of Education and Training, Gautam Budhha University,	Greater Noida, India
Ms. Bhavya Aggarwal	Student/Research Scholar	Department of Education and Training, Gautam Budhha University,	Greater Noida, India
Ms. Archana Giri	Student/Research Scholar	Department of Education and Training, Gautam Budhha University,	Greater Noida, India
Dr. Rimmi Datta	Guest Teacher	Murshidabad University	Berhampore, India

ABOUT THE EDITOR



Prof. (Dr.) Jayanta Mete is a distinguished teacher, educator, renowned author, and research guide in the fields of Tribal Education, Population Education, History of Education, and Environmental Education. He is the former Professor and Dean of the Department of Education, Faculty of Education, at the University of Kalyani, Kalyani, Nadia, West Bengal. Dr. Mete completed his M.A. in Geography and M.Ed. with outstanding academic performance at Visva-Bharati University, Santiniketan, West Bengal, India. He obtained his Ph.D. from the same esteemed institution. Throughout his illustrious career, Dr. Mete has supervised more than 63 Ph.D. scholars and has published and presented over 300 research papers in leading journals and seminars. Additionally, he has authored and edited more than 111 books on various educational issues. Dr. Mete serves as the editor of three peer-reviewed journals: *Journal of Education and Development*, *Journal of Knowledge*, and *Journal of Educational Thoughts*. His contributions to academia, particularly in the realm of education, continue to inspire scholars and educators alike.