

Preface

Special Issue: EduRobotX 2025 – Co-Creating Innovation for Educational Robots and Robotics for Learning

15–19 September 2025, Newcastle and Durham, United Kingdom,

<https://ea-tel.eu/sig/edurobotx/edurobotx2025>

Welcome to the proceedings of the 3rd International Workshop on Educational Robots and Robotics (EduRobotX 2025), held in September 2025 in Newcastle and Durham, United Kingdom, as part of the European Conference on Technology Enhanced Learning (EC-TEL 2025). The workshop was organized by the Special Interest Group EduRobotX of the European Association of Technology-Enhanced Learning (EATEL), which brings together researchers, educators, designers, and technologists committed to advancing the role of robots and robotics in education.

Aligned with the overarching EC-TEL 2025 theme of inclusive and equitable quality education for all, EduRobotX 2025 focused on the unique potential of educational and social robots as tangible, embodied, and interactive technologies that enrich learning experiences in physical spaces, stimulate learner curiosity, and respond to diverse learner needs. Educational robots offer promising opportunities to create engaging, adaptive, and socially meaningful forms of learning across formal and informal educational contexts.

This year's workshop particularly explored how robots can support diverse learners across the lifespan, including children, adolescents, adults, and older learners, as well as learners with special educational needs. Special attention was given to inclusive applications for neurodivergent learners, learners with disabilities, and other groups who may benefit from personalized, multimodal, and motivating learning support.

The workshop was structured in two complementary parts. The first part featured presentations of submitted papers in interactive sessions with discussion and exchange. The contributions covered a wide range of timely topics, including embodied generative AI for literary dialogue, social robots for computer science education, turn-taking in robot-assisted quizzes, AI-enhanced lesson design, robotics for learners with dyslexia, computational thinking with robots, robotics in kindergartens, and teacher training for humanoid robots in schools.

The second part consisted of a co-creation workshop based on Design Thinking, inviting participants to collaboratively imagine future scenarios, applications, and pedagogical concepts for educational robotics. This participatory format reflected the interdisciplinary and innovation-oriented spirit of the EduRobotX community.

We are pleased to present this collection of papers, which reflects the breadth and growing maturity of research in educational robots and robotics. The proceedings demonstrate how rapidly the field is evolving through the integration of artificial intelligence, human-robot interaction, inclusive pedagogy, and evidence-based educational design.

We would like to sincerely thank all authors for their valuable submissions and inspiring presentations. We also thank the reviewers and program contributors for their time, expertise,

and constructive feedback. Our gratitude extends to all workshop participants whose ideas, discussions, and collaborative energy made EduRobotX 2025 a vibrant and rewarding event.

We hope these proceedings will contribute to further research, dialogue, and innovation in the use of robots and robotics for inclusive, effective, and engaging learning.

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