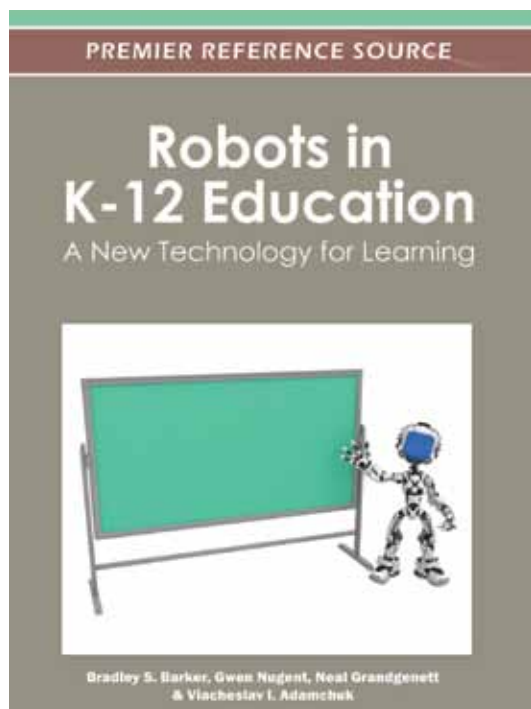


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Robots in K-12 Education: A New Technology for Learning



Bradley S. Barker (University of Nebraska-Lincoln, USA),
Gwen Nugent (University of Nebraska-Lincoln, USA),
Neal Grandgenett (University of Nebraska-Omaha, USA)
and Viacheslav I. Adamchuk (McGill University, USA)

Educational robotics provides students with a learning environment that has the potential to successfully integrate concepts within science, technology, engineering, and mathematics (STEM) into K12 learning environments in class, after school, or for robotics competitions.

Robots in K-12 Education: A New Technology for Learning explores the theory and practice of educational robotics in the K-12 formal and informal educational settings, providing empirical research supporting the use of robotics for STEM learning. An essential resource for STEM educators, the book explores processes and strategies for developing and implementing robotics-based programs and documents the impact of educational robotics on youth learning by presenting research-based descriptions of robotics technologies and programs, as well as illustrative examples of learning activities, lessons, and assessments.

Topics Covered:

- Constructionist Learning Methodologies
- Educational Robotics
- Hardware and Software for Robotics
- Innovation in Formal and Informal Educational Environments
- Medibotics
- Project-Based Learning with Robotics
- Robotics Competitions
- Robotics Outreach Programs
- Theories for Educational Robotics
- Virtual Robotics

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Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Bradley Barker, Associate Professor and Youth Development Specialist with Nebraska 4-H received his Ph.D. in Administration, Curriculum, and Instruction in the area of Instructional Technology in 2002. Dr. Barker spent eight years with Nebraska Educational Telecommunications where he was an Interactive Media Producer. Dr. Barker has directed media productions for the CLASS project, the Nebraska Law Enforcement Training Center, and the Nebraska National Guard. Dr. Barker has been the Principal Investigator on two National Science Foundation Grants to develop the Nebraska 4-H Robotics and GPS/GIS program and to scale-up the program to a national audience. Dr. Barker was also the PI on the National 4-H Robotics: Engineering for Today and Tomorrow curriculum development grant for National 4-H Council and CSREES. Dr. Barker's research interests include the development and evaluation of educational technology systems for STEM education in non-formal learning environments.

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