

Robotics Technology Supported Pedagogic Models in Science, Technology, Engineering, Arts and Mathematics Education

Authors : Sereen Itani

Abstract : As the world aspires for technological innovation, Innovative Robotics Technology-Supported Pedagogic Models in STEAM Education (Science, Technology, Engineering, Arts, and Mathematics) are critical in our global education system to build and enhance the next generation 21st century skills. Thus, diverse international schools endeavor in attempts to construct an integrated robotics and technology enhanced curriculum based on interdisciplinary subjects. Accordingly, it is vital that the globe remains resilient in STEAM fields by equipping the future learners and educators with Innovative Technology Experiences through robotics to support such fields. A variety of advanced teaching methods is employed to learn about Robotics Technology-integrated pedagogic models. Therefore, it is only when STEAM and innovations in Robotic Technology becomes integrated with real-world applications that transformational learning can occur. Robotics STEAM education implementation faces major challenges globally. Moreover, STEAM skills and concepts are communicated in separation from the real world. Instilling the passion for robotics and STEAM subjects and educators' preparation could lead to the students' majoring in such fields by acquiring enough knowledge to make vital contributions to the global STEAM industries. Thus, this necessitates the establishment of Pedagogic models such as Innovative Robotics Technologies to enhance STEAM education and develop students' 21st-century skills. Moreover, an ICT innovative supported robotics classroom will help educators empower and assess students academically. Globally, the Robotics Design System and platforms are developing in schools and university labs creating a suitable environment for the robotics cross-discipline STEAM learning. Accordingly, the research aims at raising awareness about the importance of robotics design systems and methodologies of effective employment of robotics innovative technology-supported pedagogic models to enhance and develop (STEAM) education globally and enhance the next generation 21st century skills.

Keywords : education, robotics, STEAM (Science, Technology, Engineering, Arts and Mathematics Education), challenges

Conference Title : ICIRT 2018 : International Conference on Innovations in Robotic Technology

Conference Location : Dublin, Ireland

Conference Dates : January 30-31, 2018