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Primary Robotics: Laying Sound Foundations

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Abstract

Robotics has recently reappeared in primary education under the banner of curriculum enhancement. Some thirty years ago it made a brief appearance as control technology and in some approaches to the Logo floor and screen turtle. A more descriptive term would be 'controlling external devices' where these included motors, lights and sensors. Like computer programming, such activities are seen as the prerogative of late and post-primary education: an interface to secondary school. In a computer-rich culture, connected or otherwise, this is not satisfactory. Capability to construct, be it with letters or material, is intrinsic to primary education from the outset. Practice that introduces the foundations of robotics in the foundation stage of education is described. Its rationale is elaborated in the context both of the computer as a new medium. This is informed by some recent proposals about the nature of technology and their implication for primary education.

Keywords

robotics, primary school, technicity, curriculum, pedagogy, language, programming

Biographies



Mike Doyle is a primary school teacher who has had a long involvement with computers in school. He is former Chair of the British Logo User Group and a founder of the EuroLogo series of conferences (now Constructionism). As an ICT and technology coordinator with a psychology background, he has an interest in the human capacity for technology. A former local politician and school governor, he has observed the difficulty educationalists have with ICT. He teaches design & technology using LEGO.



Vessela Ilieva is a primary school teacher in Sofia, Bulgaria. With a colleague she wrote the first Bulgarian primary school national curriculum in IT and was part of the team that wrote the second. She authored teacher's and children's books in support of them. She remains a primary school teacher committed to creativity in ICT. To this end she teaches teachers to teach ICT in this way. She is working in her school with LEGO construction and robotics with children from first to fourth grade as well.

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