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Teaching: Traditional versus Turing

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Abstract

The computer has been present in its various forms in primary school for over thirty years, yet teaching remains traditional. The term ‘information and communication technology’ reveals educationalist’s inadequate conception of what is truly a change in the medium of instruction. A focus on the “technology” has finessed the question asked by Alan Turing in 1950 about the relationship of the computer to the human mind. In primary education its relationship is to rapidly maturing uniquely human minds. In this context the word ‘computer’ also has unfortunate connotations in that it implies the mechanisation of mentation at the heart of primary schooling. Turing teaching as a term is introduced to shift focus from ever-changing technology to the nature of the medium and its relationship to a curriculum designed for those rapidly maturing minds. Media are categorised as Talk, Text, and Turing according to their relationship with the mind. Each of these 3Ts imposes a particular teaching method on educators, notably on the literacy and numeracy at the core of primary education. Text-based teaching is considered ‘traditional,’ its method imposed by pre-computer text media. Its reference is the set of proposals published in 2013 for the English national curriculum. Turing teaching, not to be conflated with progressive education, seeks to maximise the potential of the new medium to transform education. Its basis is in a new view of the evolution of the human capacity for technology, technicity. This theoretical framework offers support for Papert’s intuition that making objects open to public inspection is more “felicitous” for learning than verbal instruction. This view runs counter to the cultural perception that language is humanity’s highest cognitive capability. Technicity is consistent with fundamental scientific principles, in contrast to the naïve presumption about language and the social brain. It also offers an explanation of how technology provides us with control over the environment. This framework, in combination with the window that written language opens into the workings of the mind, is used critically to examine the validity of traditional teaching method in numeracy and literacy. Turing’s concept possesses the cognitive power, now embodied in the knowledge and technology that computer science offers, to transform learning in the primary phase if method is matched to the medium.

Keywords

Technology, technicity, primary education, educational medium, teaching method

Biography



Míchael Ó Dúill, is an experienced educationalist in the primary and special needs fields, where thinking beyond craft traditions is essential. A psychology and engineering background led to an interest in language and technology. Questioned about entropy by his university admissions tutor, he has an abiding interest in the power of the simple. Realisation that the word is not enough and that we don't know how we can draw led to the proposition that humans evolved a unique technological capability – technicity.

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