Educational Technology Debate – Are We Asking The Wrong Question?

Stephen Wealthall

Education is the process whereby information is organised into knowledge and, with appropriate processing and experience may result in wisdom and therefore a happier, productive and less risky life. Both factual and emotional education basically use the same process and both require that, as well as the provision of information, the recipient has opportunity to interact with the information in different ways, and develop a multi-perspective 'feel' for the information so that it is not just perceived as an isolated, one-dimensional fact.

In my clinical experience as a Developmental Paediatrician I have always accepted Freud's statement that 'the task of adults is to work and love' and 'the task of children is to play'. Children's play is in fact a combination of work and love, and the way that children learn is through playing, which is always multi-dimensional. Children listening to a story only really remember the story when they begin to act it or make the teller act it, make faces like the characters, dress up, draw pictures and submit their toys to the events of the story. Good teachers instinctively know these things and ensure that all sensory modalities are used to engage children in the learning (playing). Good teachers also know that children have large individual differences in whether auditory, tactile, visual or emotional pathways are their preferred way of processing information and foster the appropriate ones and the appropriate rate of learning for the individual child.

In my own experience of developing Computer Assisted Instruction (CAI) for medical students in the early 90's, it became apparent that using CAI techniques alone produced a one-dimensional view of the topics taught. Students taught the interpretation of electrocardiograms (EKG or ECG) by CAI alone and tested by automated CAI methods, performed well in computerised testing but poorly when tested in clinical situations. Students who took both the CAI learning and a mentored course performed better than students who took either only the CAI or the mentored course.

The debate about which Educational Technology is appropriate for improving educational access is posing the wrong question. Children, particularly in disadvantaged situations, will benefit from provision of electronic information, but the provision of information alone will not result in them processing into knowledge, let alone wisdom. Educational technology must provide as many ways to interact with information as there styles of learning, and this can only occur if the teacher or mentor has a central role in finding out what a child's learning style is, and then providing challenges that make the child interact with the information from different perspectives.

Despite being an early supporter and sponsor of OLPC and an enthusiast for CAI, I believe that our role as educationalists must be to ensure that whatever technology we provide for information presentation, we must keep the role of the teacher and mentor as the key and central component. This is particularly important as politicians and administrators will always support anything that reduces the cost of personnel, particularly if the technology can be packed with advertising propaganda, which means that big business can spread its' very mixed messages and pay part of the cost. We need to balance our wish for the widespread use of the delightful technologies that we have developed, with the reality that genuine life-long learning patterns can only be built on a basis of the centrality of the teacher as a mentor, monitor and orchestrator of childhood learning.

Stephen Wealthall trained as a Developmental and General Paediatrician in Sheffield, England and regarded teaching as his most important role. He was the founding director of Medical Education Development at the University of Auckland, New Zealand, where he established the first Computer Assisted Learning laboratory in Medicine.

Submitted to 'Educational Technology Debate' the website of a world wide group passionate about using technology to improve education for educational resource-poor children around the world. Members of the he group were part of the movement that led to the development of the 'One laptop Per Child' (OLPC) programme which resulted in the development of a '$100' laptop which sponsors provided to almost 100,000 children around the world, and which volunteers provided the software for. That programme has ceased but the volunteers are looking at ways to provide similar support for children's education. The philosophy of the group can be found here:

http://edutechdebate.org/2014-ict4edu-trends/how-can-educational-ict-be-relevant-to-the-poorest-of-the-poor/