



# The Future of Learning

**A Futurizon Report**

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Right from infancy, we all have to learn advanced human skills such as communicating effectively, caring for others, how to be useful members of society, and how to cope with all that life brings our way, emotionally as well as physically. That means learning to understand other people, social structures and cultural rules as well as the technical stuff about the many physical systems around us. Almost as importantly, we have to learn skills that enhance our lives such as playing music, painting, acting or sports, and even the appreciation of others doing these things. All of these will be just as important in the future. What will decline in importance as computers get smarter and gradually take over is the 'knowledge' taught in schools. Computers will do most of the remembering and thinking for us, and automate most of the work that comprises the knowledge economy. We will still want to learn the knowledge and skills, they just won't be as commercially valuable as they are today. Robots and machine tools have already done this to some physical jobs such as skilled factory work, and future robots will continue to automate many other jobs, even surgery and construction.

As physical and intellectual tasks are delegated increasingly to smart machines, those softer bits of our jobs, primarily human interaction, will grow. It is interesting and indeed unfortunate that today's education system concentrates mainly on training our young people for the dying 'knowledge economy' rather than the future 'care economy'. By the time today's school-starters leave university, the knowledge economy will be history. The economically useful skills will be those the kids learned in the playground, on the school bus and the night club. Just as the CEO spends a lot of time on golf courses and dinners with clients, so most people will focus on interaction face to face with other people. Sometimes this will be in roles such as caring, sales and marketing, entertaining, or providing personal services such as therapy, counselling, training and so on. Sometimes it will just be spending time with people. This might not sound much of a job, but as the economic focus shifts from GDP to quality of life measures, we will value other aspects of wellbeing above material provision, which in any case will continue to fall in relative price into the far future. Counteracting loneliness is at least as valuable for society as building more computer displays. Certainly, a much better understanding of relationships, and indeed the underlying psychology, should be a much stronger part of the future curriculum. If someone is going to have a career as a personal trainer, or lifestyle consultant, it will be more important to know how their clients think than the more traditional academic knowledge taught as the main focus today.

Nevertheless, technology can help a great deal in education. Very soon now, video visors will be able to immerse students in 3d computer generated worlds where they can interact and explore with other people, or simulated people. This will allow students to practice interactions such as counselling, leadership etc in safe environments. While AI might not be able to reproduce human responses perfectly, it would probably be good enough for simple training exercises, allowing human teaching to be concentrated on skill honing and refinement, and for teaching the more complex skills. What the computer can do that humans can't, is to accurately reproduce the same situation again and again, with exactly the same programmed responses, so that student could experiment with different behaviours and be sure that the difference in outcome was due to the changes they made.

It gets slightly more complex when we realise that many of the interactions in future life will be with such AI entities, which might have varying degrees of sophistication. Students will certainly need to learn human skills, but also to learn how to deal with AIs.

Change will not slow down, we need to learn to adapt better and faster, and this means that the education system will need to be much more rapid in recognising the kinds of skills that students will need when they leave the education system, and not teach the ones their parents needed.

## ABOUT THE AUTHOR

Ian Pearson graduated in 1981 in Applied Mathematics and Theoretical Physics from [Queens University, Belfast](#). After four years in Shorts Missile Systems, he joined BT Laboratories as a performance analyst, and later worked in network design, computer evolution, cybernetics, and mobile systems. From 1991 until 2007, he was BT's Futurologist, tracking and predicting new developments throughout information technology, considering both technological and social implications. He now does exactly the same things for Futurizon, a small futures institute. As a futurologist and consultant, he lectures widely on his futures views. In between conferences, he writes on topics such as machine consciousness, human evolution, women's issues, ageing, social trends and advanced computing technology.

He has received many awards for his papers, written several books and has made well over 400 TV and radio appearances. He is a Chartered Fellow of the British Computer Society, the World Academy of Art and Science, the Royal Society of Arts, the Institute of Nanotechnology and the World Innovation Foundation. He was recently awarded an Honorary Doctor of Science degree by the University of Westminster.