Foreword

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To those in the know, it may seem as if e-learning has lost its novelty already. However, if we take human generation time as a yardstick, it has been with us for at most 1 generation only. And in those measly 25 years significant changes have already taken place. Indeed, I am convinced that the pace at which changes thrust themselves upon the educational sector, is too fast for those involved in it to cope with them to the full. In part, this has to do with that same generation time: not everybody is willing to embrace change wholeheartedly; indeed, not everybody is even able to adapt to a changing situation. So, for change to take effect in all the nooks and crannies of the house of education, more time is needed, enough for instance for the baby-boom generation to be replaced by its successor (which, no doubt, will demonstrate the same resistance to pervasive change). But in no insignificant part, it also has to do with the magnitude and depth of the innovation that we are witnessing.

Confronted with the notion of e-learning, or technology-enhanced learning if you like, some will react that there's little news under the sun. Sure, e-learning constitutes an innovation, but hasn't education always been confronted with technology-infused change? Perhaps, for many centuries the apprenticeship system held sway and little changed in the way knowledge about trades and professions was transferred, even if the professions themselves underwent technological progress. However, with the advent of the industrial society and the need to adopt a form of 'broadcasting' in education in order to be able to teach ever growing numbers of labourers, educational innovations have been adopted ever more rapidly. From the slate and pencil, via the blackboard to the white board and smart board; from individual oral exams via hand-marked written exams in classes, to machine-marked multiple-choice exams for the masses. Etc. So, the argument goes, technological innovation has been part and parcel of education at least since the onset of the industrial revolution. And now we are merely witnessing the next step, the incorporation of the computer. But this instrumentalist argument misses the mark in two important ways.

First, it gravely underestimates the extent of change that technological innovations are capable of. Technologies, quite in general, are designed to cope with a particular practical problem, through their design they fulfill a particular function. Thus, a car is a device to transport oneself from A to B. However, philosophers of technology have discovered long since that technologies posses powers of change that go beyond the functions that they were designed for. Wiebe Bijker calls this the 'interpretative flexibility' of technology, Steve Woolgar talks about technology's 'new readings'. And once it is pointed out, it is all too obvious that eventually technological artefacts are always used in ways that transgress their intended functionality. Cars are used for racing on a circuit or for showing of one's wealth, functions that can hardly be seen as transporting people from A to B. Lack of space keeps me from expanding the argument but, really, it is quite simple to find corroborating evidence with most if not all technological devices that our society has brought forth. What goes for cars, goes for blackboards -I vividly remember the beautiful colourful drawings my teacher used to make on the blackboard for her pupils' birthdays; I don't think the inventors of the blackboard had this frivolous use in mind when they designed them, for multiple choice exams - 'objective' comparisons of student achievements can now be made with a push on a button, indeed for almost any educational innovation. In short, then, a technology is never a mere technology as it has the power to shape our culture, including our educational culture.

Second, the computer is a kind of innovation that is not on a par with any of its predecessors. The reason is that a computer is the first genuinely interactive artefact, and it gets ever better at that. Interactivity does not make it human, but it is one of the requirements for being humanlike. Although we are still far removed from the moment a computer could replace a human tutor or teacher (and I am not entirely sure it ever should), it certainly can do so already in some respects. The simplest example is the drill and practice exercises in language or math education. With the computer, the pupil gets instant feedback from a 'teacher' who never tires and always remains patient (unless it has been programmed not to). These are achievements that black boards and their likes can never be capable of. So the sheer impact of the computer as a technological artefact is in a qualitative sense different than anything before it. For sure, then, it is a powerful innovation.

Together, these two arguments make for a potent mixture indeed. Therefore, the introduction of e-learning is not merely yet another technological trick in the teacher's bag, but a forceful change agent that is going to alter the educational system irreversibly and deeply. Those who stick to a mere instrumentalist view are fooling themselves and their followers; it will not be long before this becomes apparent to each and everyone in education, reluctantly or wholeheartedly. The present volume stands witness to this. Without going into any details, the themes that are discussed - networked collaborative learning, design for e-learning including the use of multimedia and virtual reality, usability and user experiences, and most tellingly perhaps the inclusion of affect in learning - all cry out 'e-learning makes a qualitative difference to learning, learning is never going to be the same anymore'. Not only has the discussion of learning acquired a new depth, we are even beginning to think about education, about learning and teaching along a whole set of new dimensions. The authors and editors are to be congratulated with their achievement.

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