Editorial: Education, Technology and Society

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Fashionably rebranded in educational circles as 'information and communications technology' (ICT), new technologies such as the Internet are seen by many commentators as prompting fundamental structural changes as multinational corporations and the governments of developed countries shift their attention towards the demands of the 'information society' and 'knowledge economy' (for example, Castells, 1996; van Dijk, 1999). Although often undermined by an implicit determinism in the innate 'power' of technology to affect 'change', such observations have played an important role in heralding ICT as a key element of contemporary society and, it follows, any academic study and discussion of contemporary society.

ICT is therefore one of the most important areas of analysis and debate for educationalists; but, curiously, it is an area to which many mainstream educational writers and researchers have paid only lip service. Most writing and research on ICT is produced by the hardened clique of (more often than not) ex-science, mathematics and technology teachers now working in teacher training departments of education who form the closed and self-referential academic 'educational technology' community. Most academic examination and discussion of education and ICT therefore takes place within the pages of the number of specialist 'educational technology' journals which have been established over the past twenty years. Within the pages of these journals articles are regularly presented concerning 'the potential educational benefits' of different ICT applications or small-scale confirmatory case studies of the successful use of software applications with learners. Where studies and discussion of ICT do feature in more 'mainstream' and influential education journals the tenor of articles is often little better. If this body of work is to be taken at face value then educational technology exists in a vacuum untainted by the social, cultural, political and economic realities of education.

The closure of the educational technology community has therefore

produced a rather skewed view of education, technology and society. Within the current literature the onus would seem to be very much on the 'technology', followed a fair way back by narrow 'educational' concerns and then, left in the starting blocks, the overlooked matter of 'society'. Whilst the existing body of educational technology literature certainly has a valuable part to play in the education studies field, there is a concern that, on its own, such writing presents a very distorted and technicist view of ICT and education. Redressing this imbalance was one of the primary objectives of this particular special issue.

I have argued before that ICT and education is largely a 'game' (or, following William Gibson, a 'consensual hallucination') where politicians, industrialists, employers, academics and educators happily perpetuate the myth of an empowering and 'transformative' educational technology for a variety of strategic reasons (Selwyn, 2002). As long as computers are sold, policies and initiatives introduced, skills gaps identified and core competencies delivered, the educational community is happy to put a tick in the box besides 'ICT' regardless of the fact that, in practice, ICT is a chaotic and often peripheral part of what goes on in educational settings. Indeed, the disparity between the short-term, rhetorical importance of ICT and the less illustrious realities at the 'chalkface' are all too striking – yet few educational technologists appear concerned that ICT in the classroom remains 'over-sold and under-used' (Cuban, 2001; Reynolds, 2002).

Thus, as ICT plays an ever-increasingly important role in much of what goes on in society there remains a pressing need to challenge this cosy orthodoxy. The application of new technologies to educational structures *does* have profound implications for what we consider to be 'education' and there are a host of important questions that need to be explored by academics in this area. Above all, there are crucial political, economic, social, cultural, technological and aesthetic aspects to ICT which are rarely, if ever, discussed in educational journals such as this. Of course, educational studies is by no means the only academic discipline to fail to discuss ICT in an adequate manner. As Gauntlett (2000) observes, much academic writing about new technologies has failed to move beyond cautious but enthusiastic records of these new phenomena – with 'expert' commentators often woefully adrift of what is actually going on in the real world of ICT. Writing about natural and social scientific research, Barry Wellman (2001: 2031) harshly but accurately characterizes the bulk of existing academic literature on ICT as 'pundit suppositions, traveller's tales and laboratory studies'.

That said, there *are* many examples of considered and informed analyses of

technology and education which rarely see the light of day in educational journals such as the *Welsh Journal of Education*. Such is the importance and cross-disciplinary appeal of education and technology that there are a host of authors who take realist or critical stances on technology and education. Ironically, and perhaps intentionally, such work is taking place well below the radar of 'educational studies' and, as a result, remains unread by many educationalists. My advice for students seeking cutting-edge discussion and analysis of technology and education is always to start looking everywhere but the 'Education' section of the library. Much of the best work that I have come across over the last decade has been within the pages of journals concerned with media and cultural studies, communication and information science, geography and politics, sociology and social policy, psychology and philosophy. Such is the integral nature of education to the key wider issues surrounding technology and society (such as information, knowledge, globalization, upskilling of economies and so on) that most of the key commentators on technology focus on education as part of their analyses. The fact that authors such as Langdon Winner, Mark Poster, Rob Kling, Kevin Robins, Frank Webster et al. remain largely unknown and unused by education academics says more about the narrow reading of 'technology' within the educational academic community than the shortcomings of these authors. To reinforce this point, there are also examples of authors, although often well known as general educational scholars, whose work on technology has failed to make the large impression it deserves: for example, Ivor Goodson, Hugh Mackay, John Beynon, Michael Apple, Jane Kenway, Dale Spender, Hank Bromley, C. A. Bowers and Larry Cuban. As I argued earlier, the field of 'educational technology' remains curiously closed to authors who do not fit into a narrow technicist paradigm.

It is from this background that the present collection of papers derives. The initial call for papers was a simple one: for authors to focus on the changing nature of education, technology and society and to present critical and/or theoretical perspectives covering all levels of analysis – from the global to the local, from the school to the university. From this basis we have produced a special issue of the *Welsh Journal of Education* which presents contributions from academics and researchers in Europe, North America and Australia working in a range of academic disciplines.

The issue commences with two shorter 'opinion' pieces from authors whose work on education and new technologies over the past two decades has been seminal. The books of Kevin Robins and Frank Webster – from *Information Technology: A Luddite Analysis* (1986) and *The Technical Fix* (1989) through to *Times of the Technoculture* (1999) and *The Virtual University* (2002) –

should be the first port of call for anyone wishing to acquaint themselves with a critical perspective on the economic, political and social underpinnings of education and technology. Throughout this body of work Robins and Webster have developed a powerful analysis of education, technology and society built around the wider themes of the commercialization and corporatization of education via the seemingly benign 'technical fix' of ICTs. Focusing in their piece here on higher education and the turn towards the virtual university as a solution to the perceived shortcomings of the national-liberal model of university education, Robins and Webster make a convincing argument for resisting the emerging corporate models of the virtual university and, instead, embracing a cosmopolitan global agenda. The arguments they draw upon with regard to the narrowing and restriction of knowledge that the corporate global university model currently entails, as opposed to the diversity of knowledges which are potentially available, should act as a check to the pervasive assumption in education that the Internet facilitates access to some kind of neutral and universal knowledge bank and that the only issues to be overcome are technical ones of access and cost.

Our second opinion piece is written by Janet Ward Schofield, whose in-depth qualitative study of computer use in the classroom during the 1980s resulted in one of the first detailed and realistic studies of how information technologies are actually implemented and used in the messy reality of the urban high school. Her book, *Computers and Classroom Culture* (1995), remains one of the seminal qualitative accounts of educational technology in practice. In her article here Schofield presents an overview of her ongoing work over the last five years on the implementation of the Internet into school settings – suggesting that ensuring Internet use in schools entails more than simply wiring up classrooms.

The next article by Mark Garrison then offers a detailed empirical perspective on students' use of computers in the elementary-school setting. Garrison's piece, based like Schofield's earlier work on an in-depth qualitative study of computer use in an urban school, focuses on the social contexts surrounding the apparent 'use' of computers in the classroom. In particular Garrison explores the way that teachers and students engage in defensive and 'pretended' uses of technology and learning in order to demarcate and protect their time, workload and social status within the school.

We then move on to two longer 'discussion' articles which both present critical commentaries on emerging issues which are currently seen as the 'next big things' in education technology circles yet which, of course, contain as many caveats as the long line of technology applications which preceded them. In his article Glenn Russell from Monash University considers the potential

and, more importantly, the problems of 'virtual schooling' – adding a tempered and valuable contribution to an area of educational discussion which is currently beloved of government departments and policy advisers around the world. Nina Smalley from Cardiff University then presents a reasoned discussion on the social and pedagogical implication of 'blended learning' in the school classroom – drawing particularly on the work of Robert Sternberg on developing expertise. The special issue then finishes with two empirical pieces. First, Michail Kalogiannakis from the Université René Descartes in Paris, presents an empirical analysis of physics teachers' use of an e-mail list hosted by the French ministry of education with the aim of facilitating 'virtual' collegiality amongst teachers facing curricular and structural changes aimed at increasing their use of ICT. My own article then concludes by presenting an analysis of official UK government statistics on school use of computers between 1986 and 2002 and, in doing so, highlighting key areas of interest for future educational technology research.

As a whole this special issue presents a variety of perspectives on education and technology which all highlight the many complex influences on what is so readily taken as a given in education. Of course, a special issue of the *Welsh Journal of Education* which is subscribed to by a few hundred libraries and academics is not going to alter radically the way that ICT is approached by the educational academic community. In the current 'publish or perish' climate of academe it is estimated that there are over 200,000 academic journals publishing over 2 million academic articles each year – within this overload of information and opinion seven more articles will not change the world. Yet I hope that this special issue can provide a signpost for future directions in which educational research could be heading and highlights the range of interdisciplinary leads which are there to be taken.

References

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