

The Teacher – A Forgotten Stakeholder?

Deryn Watson

Department of Education and Professional Studies, King's College London, Waterloo Road, London SE1 9NN, UK, deryn.watson@kcl.ac.uk

Abstract: There are a number of tensions and debates embedded in any consideration of the teacher, ICT and the future. In this complex climate, it is possible to argue that too little attention has been paid to the act of teaching. With widely available and different forms of information and knowledge, learners still need to learn how to learn and to think. Teachers are the essential part of ensuring this process of transformation. Their professional judgement and voice are essential in this process.

1. INTRODUCTION

The perspective from which I will discuss the role of the teacher in an ICT world is informed by literature on innovation and change, professional development, and ICT and teaching and learning, which I present at the end as a bibliography. An exploration of ICT as an innovation and its relationship to, and influence upon, change in education is not only current and at the heart of our interests, but is particularly complex as the nature of the technology itself is dynamic. Thus we are attempting to analyse and understand a fast moving innovation with attributes that shift in both complexity and ranking of significance. Understanding such a mobile innovation and its relationship to education, which itself is neither static nor fixed, needs models of change. For me, the linear models, often developed to understand the management of change, provide too simplistic a representation of such reality. This is in part because a further layer of complexity lies in the substantial societal changes within which this educational and technological relationship is developing. And these societal changes, part triggered by information and communication technologies, add to the shifting contexts in which we are operating.

The original version of this chapter was revised: The copyright line was incorrect. This has been corrected. The Erratum to this chapter is available at DOI: [10.1007/978-0-387-35701-0_35](https://doi.org/10.1007/978-0-387-35701-0_35)

C. Dowling et al. (eds.), *Information and Communication Technology and the Teacher of the Future*
© IFIP International Federation for Information Processing 2003

My analysis of this literature and the papers and discussions published in this volume, is built around what I see as a cluster of debates and tensions embedded in the themes of this conference. A useful way of perceiving such tensions, often used in analysis in applied social sciences, is to explore their characteristics as if located at opposite ends of a pole. Such analysis, by focussing on the characterisation of difference, may subsequently sharpen our understanding of such debates and tensions, but also clarify the continuities that underlie them. I am convinced we should recognise some residual tensions in our field, and indeed take responsibility for some of the discourse that suggests enormous benefits for the use of ICT in education when research often reflects patchy and inconclusive effects. In this paper I will set out to use this device of identifying differences around each of the four themes of the conference: the roles of the teacher, the teaching environment, the teacher and society, and the teacher as professional.

I intend to explore each theme as if the four represent a series of nested boxes, or stacked Russian painted dolls. The inner box is the teacher as professional, the next their roles, then the environment and the final outer box, or the largest of the Russian dolls, is the teacher and society. These boxes provide a simple form of scaffolding for the basis of my analysis. But while they represent the overall structure of my intent, in order to build, or scaffold the stack, I am choosing to start with the second box.

2. THE ROLES OF THE TEACHER

In this climate of educational and societal change surrounding the introduction of ICT, the teacher often falls between two classifications – that of a conservative resister of change, and that of a pioneer and interpreter of change. Those who focus on teachers as a block to innovation will produce and impose prescriptions for change to include the externally devised new curriculum and in-service courses to promote an innovation. This approach is, in effect, designed to redress a deficit model of teachers. This can be illustrated by the number of times teachers are referred to as the object of the imperative – ‘teachers must’, ‘teachers should’. The problem with this model is that it can too easily ignore existing perceptions and experiences of teachers. At the opposite end of the pole is the belief that lasting innovations work if they are introduced or emerge ‘bottom up’, that is from within the corpus of practising teachers. They adopt and adapt the innovation to suit the needs of their learners and classrooms. The problem here is the innovation often remains trapped within individual or small group’s interpretations and use, and rarely develops into a consensus to influence the majority.

Educational innovation and change does occur, but Fullan (1991) has repeatedly reminded us of two factors – that teachers lie at the heart of change, and that planned major innovations are often less successful than those which succeed through what I am choosing to call a form of ‘consensus of practice’. That is, teachers and related groups, such as professional associations and advisers, find enough potential common ground and value in an innovation for it to be adapted, adopted and become a regular part of their pedagogy. Sarason (1990) suggests that the problem is not what to do, but what to think. He reminds us that no-one warmly seeks, let alone embraces, significant intellectual and personal change. Change is difficult – we must address the issue of power, and power relationships, to ensure the desired change is to be achieved. The value of many of the papers and discussions in this volume is that this is what they are addressing.

Much of the work on the role of teachers and the use of ICT appears to be caught in a pincer movement between a substantial and important discussion on theories of learning, and an equally important consideration of models of teachers’ knowledge. Our understanding of the psychology of learning includes our shifting understanding of how students construct and situate knowledge. There has been an interesting partnership between educational psychology and educational ICT – and this has spawned experimental research and many applications have been devised around models of learning. This work has been valuable, and not simply in association with the use of ICT, as all educationalists are continually trying to model and understand the processes of learning. Valuable though this is, there appears to me a relative absence of corresponding discussions about how teachers can or do assimilate research about learning and translate such approaches into their teaching.

Writing about teachers and ICT is increasingly focused on the nature of teachers’ knowledge, and thus how and where ICT ‘should’ be incorporated into it. There are useful models of the various component parts of teachers’ knowledge. These are now commonly agreed to have as a basis three interlocking sets, to include subject knowledge, the knowledge of schooling, and the translation of both these in combination to arrive at pedagogic knowledge. The latter refers to knowledge to suit curriculum and learning at different levels of complexity. Thus for example a geography teacher knows and understands geography and the nature of geographical thinking, understands schools and learning, and translates that into curriculum and teaching, that is their pedagogy, of for instance the significance of plate tectonics to seven and seventeen years olds. The addition of knowledge about ICT within a pedagogic frame is a welcome recognition that this is an integral and not separate part of the complex knowledge base of teachers. Because it is here that the enormous asset that ICT can be to pedagogy, and

the changes in perception about knowledge that it can herald, are best achieved.

And yet we do have evidence that teachers are not necessarily enamoured of this ICT 'knowledge' or of its incorporation into their pedagogic armoury. We know teachers often face a dichotomy with respect to ICT use. Is ICT a skill to be learned and used as part of their pedagogy, or is ICT a means to support their pedagogy? There is still an ambiguity of what we construe as ICT use in education. Not all ICT knowledge and use has been good; there has often been too much emphasis on the fact that it is being used, without enough attention being paid to the validity of its use. Good is often very good – and in such a way that it is difficult to evaluate its impact; but often ICT use is not good, at a low level, with the emphasis on the technology and skills not clearly enough related to teachers' other three knowledges. And we know that part of the problem lies in the fact that good pedagogic ICT use involves complexity. It takes time to come to grips with both the technology and its potential service to the subject/knowledge base for which a teacher is responsible. Teachers will spend this time if they believe that ICT will support their pedagogic philosophy; they will not make a sustained effort if it does not.

So it seems clear that our current construct of the role of the teacher is fraught with contradictions. On the one hand we recognise the teacher as the basic constructor of the pedagogic environment, of the subject and content base of schooling; on the other hand we have the apparent lessening of the significance of the teacher relative to the emphasis on the learners, and their construction of knowledge. But both these emphases are but background to the foremost role of the teacher, which is to teach. Where in the debate is a discussion on what Shulman (1987) refers to as 'the act of teaching'? This is where their comprehension and reasoning, transformation and reflection form the basis of actual teaching. It would seem to me that the attention given to the new environment provided by ICT is in danger of eclipsing the act of teaching.

3. TEACHING ENVIRONMENTS

ICT has been responsible for a substantial shift in the environment for learning; teachers can be distributed in time and space – face to face, hybrid, distributed, teams. Distributed networks, fora and access to information rightly force us to ask questions about the location of learning. Here we see another dichotomy – learning within defined frames of time and space, compared with learning at any time and anywhere. There are substantial advantages of the web, for access to information from a range of sources and

distance learning. These are often characterised as a new learning environment, a replacement for the traditional setting of a classroom – in which the tables of desks may be set out in rows or clusters. And the characterisation of a classroom as ‘traditional’ by the ICT community often implies this is bad. It seems to me that this polar painting of the new as automatically good and the traditional as bad misrepresents the complex relationship between learners, teachers and the actuality of the learning environment.

I would argue that the prime context for learning is how and where maximum interaction between teachers, learners and knowledge can be achieved. With the emphasis on independent learning, few address the reality of location as a ground base for the new wider reach that the technology provides. Yet this base provides the development of situated learning communities. I note that many on-line environments emulate the notion of a room, a place to which learners feel they belong and where activities ‘occur’, whether more formal sessions, seminars, discussions or general chat. Learning is an individual activity, but not exclusively. We know that the social dimension of groups, both formal and informal, enhances the learning for a number of reasons, which include interaction between learners, the vocal exploration of ideas, the development of social skills, a counter to isolation, the broadening of social networks. The web opens up the classroom, not simply to access information, but to contacts with other communities; thus it should be seen as an additional asset to the classroom, rather than its rival or replacement.

But for my purposes in this paper, the value of the classroom, however it is constructed or perceived, is that it is the home base where the act of teaching occurs. Much is written about the teacher in this new ICT environment as causing a shift from teaching to guiding, a facilitator – as if current constructs of the act of teaching were dominated only by the ‘transmitter of knowledge’ model. This is a simplistic characterisation; I feel equally uncomfortable with the phrases such as ‘from sage on the stage to guide on the side’. The roles of tutor – coach, guide, companion, supporter – are important in this environment, but not, I would contend, at the expense of teaching itself.

The focus on the supportive, tutoring role suggests learners in school do not need more than agenda setting. But teachers are in charge – they are empowered by society to be responsible for learners to learn how to learn and to think. Authority is located in a physical institution – and here authority is not primarily associated with power, but with responsibility. Who is in charge? Who assumes the pedagogic responsibility? This voice is not an authority on knowledge, but the voice of someone in charge of a process. Many may consider a class outmoded, but it is where groups of

learners share a common experience, a particular voice, and an interpretation – the teacher’s voice.

Access to data, to information, to knowledge is not the same as learning. Some of the literature, both about the teachers’ knowledge, and the wider avenues to knowledge available to students, seems to suggest that knowledge is a box of something, bounded and wrapped as a gift to be available or given to learners. A box of knowledge is an odd thing – knowledge is organic, it shifts, grows, and changes in these fluid times. Our geographical knowledge, for example, as with so many other subjects, has broadened and changed over the years, and most recently through the advent of satellite imagery and geographical information systems. It is the use of the noun, knowledge, which obscures the heart of the matter. The act of teaching is about verbs - to enable learners to know, to think, to understand. It is through the continual interaction with the elucidation and reasoning of teachers that learners become more proficient in thinking and understanding. Thence they can increasingly assume more responsibility for their learning. Teaching, even with the advent of the technology and widening access to information and knowledge, seems to me to be an essential part of learning. It is teachers who are responsible for ensuring the transformation from ignorance or confusion to knowing, thinking and understanding.

4. THE TEACHER IN SOCIETY

There are relatively few published contributions from within the ICT community on the theme of the teacher and society. But the reality is that debate about education and the use of ICT is not happening in isolation. Teachers, learners, managers, parents, communities are all but part of the world in which we live. Indeed education has a strong compact with society as part of the way with which society progresses and copes with change. Developing countries place a high premium on the role and function of schools and teachers that we in the developed world sometimes forget, and often take for granted. And the social, political and economic structures in the world have changed dramatically in part because of the growth of the technology and increased globalisation.

There has been a close association for some time between the perceived benefits of ICT and economic growth in a competitive world. Governments have promoted the use of ICT in education as part of an agenda to prepare an economically successful society by ensuring that its citizens have employable skills. Curriculum has been defined in association with the development of essential ICT skills, thus leading to the dichotomy of purpose already mentioned. As Wood (2002) has stated, there is an axis of

tension between teachers as technicians – that is, as deliverers of a skills based agenda – and teachers as professionals, who know pedagogy and pupils.

There is a further tension for professionals between what society expects of teachers – from the specific association with skills of pedagogic knowledge to much broader issues in society. The role of teachers lies well beyond the development of cognitive skills. They are expected, and wish, to address issues such as inequity, personal and group rights, safety and values. The current high profile worries about security and risk and the threat to human rights and liberties in association with ICT – all these fall on the shoulders of teachers. The teachers in many communities are under pressure, from governments and parents and society in general – to welcome and embrace the technology, grapple with the measurable outcomes of skills, use it proficiently in subject teaching, and address the tensions ICT brings to society.

So how do teachers respond to this pressure and to being stretched between competing goals? They leave – they are leaving education, and new graduates are not entering the profession. There is substantial attrition after 2 and 10 years of service in the UK. The discourse in society about teachers in certain contexts is negative and damaging.

5. THE TEACHER AS PROFESSIONAL

The reason I have left the teacher as professional until last is because I believe the tension between the teacher as a technician or professional lies beneath the arguments above. In general, certainly in the UK, and without the complications that arise from ICT, the notion of teaching as a profession has been under threat.

Professionals, such as lawyers, doctors and teachers, have a number of factors which contribute to their sense of being professional, which include specialist bodies of knowledge, an agreed understanding of identity, a philosophy of reasoning and judgement, their expertise incorporated in independent professional bodies and associations. In varying degrees, governments have sought to erode this independence. Teachers in particular have become vulnerable. Governments are increasingly imposing their definition of teaching, by involving themselves in the nature of the curriculum, defining outcomes to be measured, and identifying the means whereby it is to be ‘delivered’. And this government-sponsored definition is characterised by a series of competencies – for both teachers and learners. This characterises the teacher as a technician, with narrow and specific goals.

Such a characterisation leaves no room for a teacher's expertise. And yet it is this expertise that underpins a teacher's sense of identity, voice and self. Over time their growing expertise and wisdom contributes to their personal commitment as professionals. Teaching, as with other professions, is a very personal endeavour. The literature about teachers refers to their endeavours not simply as purveyors of pedagogic knowledge. We also know them as holders of tacit knowledge built up through experience, as professionals with a range of styles to suit circumstances. People embark on change for a number of reasons, but reasons that invariably have a resonance with their personal philosophy about teaching. Teachers are thinkers, with emotions, beliefs and enthusiasms – and it is this that characterises them as much as their professional expertise. Teachers have a professional voice – and it is that voice and style which pupils often remember long after they have left their formal education.

The axis of tension that appears to surround teachers is I believe in part because the significance of the personal in teaching – the individual voice of the teacher - has been sidelined in the recent push for performativity through definitions of competence. Teaching is an intellectual pursuit, which embraces ideas, reasoning, thinking and communicating. It is also a human pursuit, where individuals draw upon attributes such as humour, metaphor, and emotions in the pursuit of effective teaching. Serious problems arise in the medical profession when doctors treat the disease not the person. Equally serious problems arise if teachers strive to know their pupils only by their cognitive capabilities, without concern for their individual characters, foibles, concerns and circumstances.

The professional development of teachers based on a competency approach would appear to have a limited chance of succeeding. Practice is more likely to be transformed by an approach that meets their intellectual and emotional needs as professionals. Change, a deep process of restructuring, is likely to occur when there is a strong personal involvement in the matter in hand.

6. CONCLUSION

And so the teacher as professionals appears to me to lie at the heart of the stacking boxes – the core of what makes a teacher. Current discussions place useful emphasis on theories of learning and models of teacher knowledge. I would argue that the teacher has often been a relatively absent figure. For this reason I am characterising the teacher as the forgotten stakeholder.

The analysis in the papers in this book, often very pertinent and always informative, contributes to the conception of the teacher of the future. There

have been lots of words like cognition and learning; but few about responsibility and the act of teaching. What has been missing is I believe a greater understanding of the sociology and philosophy of teachers. Teaching is an emotional and intellectual business.

REFERENCES

- Anderson, R. (2002). Guest editor, special issue. *Journal of Computer Assisted Learning*, 18(4).
- Barrow, R. (1984). *Giving Teaching back to Teachers*. Toronto: Harvester Wheatsheaf.
- Becta (2002). *NGfL Pathfinders Report*. London: Department for Education and Skills.
- Becta (2002). *ImpaCT 2 Reports*. London: Department for Education and Skills.
- Bowers, C. (1988). *The Cultural Dimension of Educational Computing*. New York: Teachers College Press.
- Bryson, M. & de Castell, S. (1994). Telling tales out of school: Modernist, critical and postmodern "true stories" about educational computing. *Journal of Educational Computing Research*, 10(3), 199-221.
- Collis, B. (1998). New wines in old bottles? Tele-learning, Telematics and the University of Twente. In F. Verdejo & G. Davies (Eds), *The Virtual Campus*. Boston: Kluwer.
- Collis, B. & Moonen, J. (2001). *Flexible Learning in a Digital World*. London: Kogan Page.
- Cuban, L. (1986). *Teachers and Machines: The Classroom Use of Technology since 1920*. New York: Teachers College Press.
- Cuban, L. (2001). *Oversold and Underused*. London: Harvard University Press.
- Denning, T. (2001). Guest editor, special issue. *Information Technology for Teacher Education*, 10(1&2).
- Dwyer, D. C. (1996). The imperative to change our schools. In C. Fisher, D. Dwyer, & K. Yocam (Eds), *Education and Technology: Reflections on Computing in Classrooms*. San Francisco: Jossey Bass.
- Erault, M. (1994). *Developing Professional Knowledge and Competencies*. London: Falmer Press
- Fullan, M. (1991). *The New Meaning of Educational Change* (second edition). London: Cassell.
- Fullan, M. & Hargreaves, A. (Eds) (1992). *Teacher Development and Educational Change*. London: Falmer Press.
- Hargreaves, A. (1994). *Changing Teachers, Changing Times*. London: Cassell.
- Hargreaves, A. & Fullan, M. G. (1992). *Understanding Teacher Development*. New York: Teachers College Press.
- Huberman, M. (1993). *The Lives of Teachers*. London: Cassell.
- Lehtinen, E. (2000). Information and communication technology in education: Desires, promises and obstacles. In D. M. Watson & T. Downes (Eds), *Communication and Networking in Education: Learning in a Networked Society*. Boston: Kluwer.
- Loveless, A. & Ellis, V. (Eds) (2001). *ICT, Pedagogy and the Curriculum: Subject to Change*. London: Routledge Falmer.
- Morin, E. (2001). *Seven Complex Lessons in Education for the Future*. Paris: UNESCO.
- OECD (2001). *Learning to Change: ICT in Schools*. Paris: OECD.
- OFSTED (2001). *ICT in Schools: The Impact of Government Initiatives. An Interim Report*. London: Office for Standards in Education.

- Olson, J. (1988) *Schoolworlds/Microworlds: Computers and the Culture of Classrooms*. Oxford: Pergamon Press.
- Olson, J. (1992). *Understanding Teaching*. Milton Keynes: Open University Press.
- Ragsdale, R. (1988). *Permissible Computing in Education*. New York: Praeger.
- Sarason, S. B. (1990). *The Predictable Failure of Educational Reform*. San Francisco: Jossey Bass.
- Shulman, L. S. (1987). Knowledge and Teaching: Foundations of the New Reform. *Harvard Educational Review*, 57(1).
- Stevenson, D. (1997). *The Future of Information Technology in UK Schools*. London: McKinsey & Company.
- Sandholtz, J. H., Ringstaff, C. & Dwyer, D. C. (1997). *Teaching with Technology*. New York: Teachers College Press.
- Watson, D. M. (Ed.) (1993). *The Impact Report: An Evaluation of the Impact of Information Technology on Children's Achievements in Primary and Secondary Schools*. London: King's College.
- Wood, D. (2002, November). *The THINK Study (first draft)*. Retrieved from http://www.eun.org/insight-pdf/think_report.pdf

Section 2

The Teacher of The Future as a Professional