

6 Policy: looking for a magic bullet?

We have looked at what led participants into developing such a strong interest in teaching and learning and how they have viewed the opportunities presented by the introduction of computers in education. We have also seen some of their concerns about the introduction of computers into school and the impact of policy on their careers. Policy is explored in more detail in this chapter. Two key phases in policy making are identified leading to a contrast between the concerns of policymakers and those of the ‘research community’.

Early Policy

As highlighted in the biography chapter participants draw a line between an early phase of policy aimed at developing networks of support and experimentation in the use of computers to a more prescriptive phase beginning towards the end of the 1980s. However there are consistencies between these two periods. For example policy makers had always seen a vocational value in putting computers in schools— many could remember, for example, Kenneth Baker as a Minister for Information Technology talking about providing ‘young people with skills they needed for working in the new industries’. And then there was the recurring difficulty that initiatives were being announced without proper consideration. In chapter three it was seen that in the early days teachers were being encouraged to use computers when there was not the reliable hardware, appropriate software or training to support their use. One participant recalled being told that in 1982 that ‘there weren’t any schools up to speed yet for a pilot programme of putting 380Z’s into primary schools’. Much the same comment could have been made in very many local authorities at the time. One participant provided the example of initial teacher education: new teachers were assumed to be able to spearhead change, but the implications were not thought through:

Nothing had been put into teacher education. And the minister had apparently told a group of teachers that they needn’t worry because all these new teachers were coming through and they would all be fine with IT and there had been laughter.

Despite these shortcomings policy makers were seen as reactive to the difficulties that schools encountered. For example, one participant recalled being encouraged to develop a project to support children with special needs:

It began with working with children. it was unbelievable, this was just drill and practice software, eight in a class - they had severe behaviour problems, and I wrote an article about it in The Times. A Member of Parliament got hold of it, so my colleague and I were asked to go to talk to a cross Parliamentary committee on technology to tell them about how you use computers to help with disaffected children. We then got a bid together, we got five different secure establishments for children who had committed

murder and things like that to develop CAL for these children - we put in a bid for about £100K but they came back and said it had to be bigger - it was too small!

However it was not all reactive and policy makers wanted to support teachers through programmes such as NDPCAL - National Development Programme for Computer Assisted Learning and MEP - Micro Electronics Programme. The NDPCAL was set up, it was recalled by one participant, because:

In 1973 the Government wanted to investigate computer assisted learning (CAL) called National Development Program for CAL (NDPCAL) they invited people to bid for it. It was a bit like a more academic version of Becta, but the central team was only eight people... From 1974 to 1978, thirty projects were set up. Most were for higher education people, because a computer terminal cost £4000, the cost of a small house at the time. The NPDCAL were supervised by CET (Council for Education Technology) and there were common overlaps with CET, but they focused on the technology of teaching, the methods.

The legacy of NPDCAL was two-fold:

Looking out for new things was one major outcome. The second major outcome was the group of people who got a lot of experience who then went on to initiate things or be involved in things - there was something of a cascade effect of this body of people.

The striking features of this programme were the small number of people involved (the programme was directed from 'a small house in Newcastle'); the importance of networking (see the later chapter on community); and a concern for dissemination.

In 1980 MEP was set up as the first nationally funded initiative for developing computers in school:

The Government decided to launch the Microcomputer Electronic Program (MEP), which again was to be supervised by the CET...The project had two and a half million over 4 years to fund the developments of micro electronics. They decided to have three strands, training of teachers, curriculum development and software development. MEP ran a 24 hour workshop to get key players together - that seeded the establishment of the MEP.

Again this is small scale support but it was seen as helping to establishing networks of collaborators ('magical combinations' according to another participant) and 'catalysts' for development. It also helped establish a cultural legacy for thinking about computers:

Their legacy... there are traces of that all over, I think. In materials and the people they influenced at that time... the early adopters, the courses that were run, the little booklets, making connections, all those early MEP packs, you know the *Mary Rose*, all the simulations, we worked with them, so that legacy influenced us.

Another speaker noted the 'progressive' principles underlying the software:

The software we developed under MEP was absolutely wonderful. It was incredibly visionary it was pedagogically straight out of the post Plowden and one might say the post School Council curriculum development. There was such a strong tradition before 1988 for innovative curriculum development work and sort of excitement about how to make schools places that kids would really buy into ... The early work in the 1980s had come out of progressive educational ideas, and a lot of knowledge about how children really learn.

While the above quote shows the optimism of those taking part a couple of further quotes show the growing realisation that there was something of a misfit between school and computer. Participants were aware of the enormity of the task in seeing computers used in school (at least in the way that reflected their potential) without changing the nature of schools in some way. Reflecting on MEP this participant noted that:

One of the lessons to really draw is that you cannot change a whole institution by getting some pioneers and educating them and then expecting them to change the institution. The second outcome we ought to learn is that the kinds of ICT used by teachers, what they were most able to take on board, were ones that they could relate to their curriculum....what we learnt was that the software, or the techniques that were most possible for teachers to use, were the ones of manageable size in terms of changes to the teaching methods.

The successor of MEP was the MESU - Micro Electronics Education Support Unit, it was recalled that:

MESU was set up with a five year life span...The role of MESU was to support teacher-trainers in ICT. So in that respect our role to start with was to liaise with advisors in local authorities, lecturers in initial teacher education, to provide what support we could to help them with their job of training teachers. And to that end we got out and visited...because there were various teams and each of us had about twenty LEAs and about twenty institutions to support. We went out; found out what they were doing, what they needed and then we devised plans to develop resources to meet that. Then the DFES announce the ESG ... education support grant, where they were going to put significant funds into local authorities for them to appoint advisory teachers to go out and support schools with ICT. And MESU was given the job of training all those advisory teachers.

NCET - National Council for Education Technology was later to replace the MESU and some felt this transformation endangered a close link that had developed between the agency and teachers:

MESU had always been very focused on developing teachers' use of ICT, working with the people on the ground who were working directly with teachers, sort of an intermediary in a way. But at that stage we were also acting as an agent if you like for pulling together the best ideas from around the country and making those available to people. And there are all sorts of pluses and minuses about that. It did get a lot of good material out there. It did encourage people to share ideas but then there was

what you might call a regime change and we were told we had to start charging for things. So immediately people who had freely given us their time were not necessarily so keen to do that. I think it was a difficult time really.

Summarising this first phase of policy

These accounts show that policies were being taken at a national level to introduce computers in school. The need for support and development was acknowledged but on nothing like the scale required. Schools were beginning to spend serious sums on computers but in comparison very small sums were spent on research and development to support this. Those responsible for supporting policy interpreted their role in a particular way, one which meant: networking innovators; developing a pedagogical vision; a concern to work *with* teachers, not *on* teachers.

Understanding the climate of change 1980s onwards

It has already been noted that a shift in the climate in which schools operated occurred in the latter part of the 1980s. There was a sense of a ‘closing down’ of possibilities. Participants used words such as: ‘playfulness’, ‘experimentation’, ‘innovation’, ‘flexibility’, ‘creative’, ‘imaginative’, ‘excitement’ and ‘vision’ to describe their first involvement with computers but ‘somehow this got lost’. One added that this earlier period was easy to over-romanticise but:

It does kind of have a golden age feel to it, because of course a lot of that capacity of teachers to own the curriculum in that way has now been taken away from them.

A few viewed this later shift as a ‘necessary’, or perhaps a corrective phase, but all were aware of the losses and a ‘closing down’ of possibilities and freedom. The introduction of the National Curriculum was seen to have been instrumental here:

The introduction of the National Curriculum, which I think has, on balance been deeply problematic for the education system in this country... that experience has been intellectually ‘de-skilling’ for the teaching profession... what's happened to teachers over say the last fifteen years, the kind of autonomy and responsibility that teachers had for the conception of the curriculum has now largely been taken away from them... so they are now responsible for implementing the curriculum that somebody else has designed.

And again some felt these were difficult times as teachers had felt under attack:

At that stage I think teachers morale had been so battered that they were sitting back, saying ‘the governments’ trying to tell us what to do, just tell us what we have to do, we’ll do it’. And that creative side of it suffered a lot. So it wasn’t easy for people - they’d got out of the habit of taking ideas and reinterpreting them, not everybody obviously, but it, the culture, had changed.

A further quote reinforces this sense of closing down and perhaps the profession’s own complicity in letting it happen:

I can remember, and this was later when I was working at the university, completely horrifying a geography teacher from another institution because he wanted to observe every dot and comma of the national curriculum, and felt that we were under a requirement to do that; whereas I felt that I'd looked at the geography curriculum quite carefully and saw that it was an absolute mess. So my message to teachers was if you've got to do the geography national curriculum, by all means go with the spirit of it, but don't try and do the detail or you'll drive yourself mad, because it's incoherent, it's not do-able. So this guy was completely gob smacked that I would say that publicly.

Of course one aspect of the introduction of the National Curriculum which seemed to favour the use of computers was its inclusion. However this had drawbacks as well as benefits: it obliged some to do it what they would not have done otherwise, but at the same time dampened and constrained others from taking risks:

The National Curriculum thing is a kind of two-edged sword I think. Because I do think it was important when ICT got recognition in the school curriculum but then the actual process of writing the curriculum for it was a bit of a negative thing because for many people it wrote into stone what ICT was about and then it became teaching to the curriculum. And that in some sense allowed people off the hook as long as we're doing that then we're ok. We didn't get the experimentation happening. It also let people off the hook because it was all they had to do. We're still seeing many things go on partly because of what the curriculum says you've got to do and partly because of the way teachers just want to tick boxes... but we aren't getting the really good extending stuff...

It was long known that the creative opportunities provided by computers did not fit easily into school but this became exacerbated in a climate in which inspection and exam results had become high stakes. Assessment was part of this 'locked down' culture:

We have a system that's so locked down by league tables and performative criteria based on national testing systems and so on that that actually stifles creativity in more places than it fosters it and actually what you've got is little blossoming of creativity within a system that actually doesn't encourage creativity, and yet that's what they say they want in schools for the future. So I think there are contradictions in the system, profound contradictions.

A change had come over the status of support material – the tradition had been of creating material with teachers and leaving them free on how, and if, to use it. Now the guidance from the government was almost seen as compulsory. What had been offered as an exemplars (such as the school disco spreadsheet mentioned in chapter 3) had become uncritically accepted as the norm. Yet this was the safe option if you were being inspected. The process had created an 'instrumentalism' in education; a 'tick box' mentality, teachers 'playing safe', complying so you 'won't get kicked'. They lacked 'ownership' of a curriculum; they were compelled to 'deliver'.

New Labour and new initiatives

From the view point of a political historian a change of government represents a step change in thinking and culture but for many participants there was a consistency as well as change in the policies of the incoming government. They were, of course, aware of changes in nomenclature, indeed one participant noted that it was because computers were so problematic for policy makers that they were for ever changing names of the 'thing' itself (CAL / IT / ICT and so on) and the bodies to support it (MEP / MESU / NCET / Becta) and, she added, the people to lead these bodies. They were also aware that the acceptance of the *Stevenson* and *McKinsey* reports led to increased funding into school:

The Labour government when they were in opposition actually commissioned the Stevenson report and then it influenced policy when they came into power. So I think they've invested in technology in education in a way that the Tories were never going to. Now I'm not saying the Tories were not interested, they were, but they weren't I don't think, prepared to make the kind of commitment financially that the Labour government has. So I think that's very influential as well.

However, there was a consistency in terms of a commitment to, even an enhancement of, central direction, and a focus on accountability at the expense of creativity:

We're in such a locked down system at the moment that we've got loads and loads of kit, but in a way we haven't got the freedom to use it in a way that people might find exciting and thoughtful and so on...this is the quid pro quo, you know we've got the investment in education, because we've now got a much more accountable education system. The system is imposing, not intentionally but inadvertently, constraints on this kind of exploratory practice.

A recurring issue in discussing Labour Government policy was NoF training. In an earlier chapter it was noticed that NoF lacked differentiation but other criticisms were made which seemed to capture all the concerns which participants felt about policy initiatives. There were, of course, positives for some teachers and particular schools but nearly everyone conceived of 'NoF' as a lost opportunity. Several reasons for this were put forward. It was, for example, too directed (NoF was just 'bossy') and too unresponsive to local needs:

It was a great opportunity missed for lots of reasons. A mismatch of what the providers thought it was about, what the audience thought it was about...People weren't ready and when you think of the effort that was put into it, it was a massively missed opportunity.

For others it was short term and did not engage strategically with the support teachers needed:

...but I think there wasn't always a clear understanding and rationale of what was going to be done with this money and how it was going to be used. But for some schools, and indeed our colleges as well, the money arrived and there wasn't the back up or support that there might have been or not in the right way.

A range of approach was needed, not a 'one size fits all':

Over the years we have seen a whole array of initiatives and actually it is not possible to predict in advance which are going to succeed and which aren't. There was tremendous enthusiasm about NoF, it was going to be the be all and end all but in retrospect it did not turn out to be that way.

Support was being shaped to fit funding requirements and not vice versa:

Because the NoF training was ostensibly not about teaching skills and the reason for that was because it was lottery funded and the lottery could not be seen to be funding something that realistically should have been provided by the educational services...to meet lottery criteria the scheme was not allowed to teach teachers ICT skills... equipping them with the wherewithal to understand when it is appropriate to use it and when it isn't. It wasn't really a very satisfactory approach. I mean if you're going to be expected to use something then you need to know how to use it

Another focus for disappointment was the Schools of the Future programme. Again government thinking was ambitious and a huge investment in infrastructure had already taken place. However, this was a very good opportunity missed to think about how schools could be different and how the use of computers could be built in from the start:

There are so many horror stories about that, that I dread to think where it's going. I think what people think looks exciting is nothing to do with learning both in the architecture and the technology. I am very concerned about a particular video that is doing the rounds which everybody says is this wonderful new academy, when in fact what it shows is technology being used as surveillance of children: 'we know where this child is a every moment of the day, and it can't get away with anything'.

Reflecting on ICT initiatives

Participants have seen policies come and go over 25 to 30 years: what conclusions do they draw? On the credit side most see 'Policy' as necessary ('to shake things up') and to move on with implementation:

You can't keep experimenting with all sorts of things all the time. There comes a time when you have to say 'right this is...our best options and that's what we're going with'.

Policies were important to address inconsistency; you had to have a top down approach sometimes as 'everybody's going to get a basic entitlement'. Without consistency you would get 'pockets of activity in different classes but that doesn't really impact on all'.

An element of compulsion was needed to ensure computers were being used - you need a stick as well as the carrot. Inspection was part of that process:

Because after an inspection schools have to create an action plan and deliver on that. If work in ICT in schools was at a pretty low level, if Ofsted identified that schools needed to do something about it, there was a better chance that something would be done.

There were some policy successes in the take up of computers in schools and in consequent curriculum development. The UK did not compare badly with other countries. There was an acceptance that policy makers were faced with an incredibly difficult task, calling for coordination at different levels: macro agencies, such as government departments (DCSF, TDA), meso level agencies, often operating at a regional level (Local Authorities/ Advisory Teachers), micro agencies of individual schools. Blocks could appear at any level and were exceptionally difficult to deal with.

Shortcomings of policy

However, there were many more criticisms of policy than plaudits. There were always problems with funding, it was too short term:

A problem throughout the period has been the kind of sporadic approach to things where there has been little pump priming activities. And a few privileged people have been given money and there's been a feeling that this would then permeate through the system. TVEI got loads of money and then two years later everyone was expecting to do what TVI did with no money. That kind of short sighted policy decision I think has not helped.

And it was too focused on equipment rather than training as in the Schools of the Future programme:

The World Bank says 50 per cent on hardware and software and 50 per cent on training but it is only possible to give 10 or 15 % into training, but it is not compulsory and it is frequently not done.

There were strategic errors, for example, in the way in which teachers and ITE tutors had not been given ICT equipment:

I think one of the lost opportunities was not getting computers into the hands of teachers sooner...we would have had a much more highly IT literate teacher force a lot sooner if we'd have found ways of getting computers into the hands of teachers as individuals... So for me that's a fairly important thing. And you can also judge from that I see the teacher as being crucial to the implementation of ICT in schools.

There was 'initiative overload', not just regarding ICT but education in general as in these quotes from three different participants:

Politicians... they all wanting their own initiatives. Then education is plagued by initiative.

...the fascination really was in how, the longer you're in IT and education the longer you realise that it's constantly having new starts.

The system moves on to new initiatives like the white board and forgets the earlier bit that we need to be doing.

Some were ready to accept inconsistency if this led to creativity so long as:

the unevenness was known, that, say, my school was not very good at music and that any parent passionate about music would not send their child to my school, we have to ask what would work if you trust your managers, your head teacher. But we don't trust them we keep a tight control on them really so the creativity goes, some do manage to get round the system but some are very wary and fearful.

However, some felt it was the not the policies but the culture in which the policies were introduced which caused the difficulty:

It wasn't the schemes of work, it was the climate in which such things were produced, where there is a sense of prescription and 'Do this and you will be OK and you won't get kicked', and all of that... It's the sense of that period of prescription, which emerged when the National Curriculum came in the late 1980s.

Above all recent policy suffered from a top down approach:

You need to find out on the ground what the impacts of these things are going to be before you can really move it on.

Indicative of the problem was that the changing role of advisory teachers'. Participants knew from their own experience the LA advisory service was a useful intermediary between policy and school:

...we had the advisory teachers scheme which independent reports had said had been very effective at helping to move teachers on, when they'd got someone who could come into their classrooms and work with them and help to move it on.

However, the role had become much more of one of inspection and local knowledge was being ignored. And here there was a pressing need for intermediaries as there was a basic confusion between government and schools. As all participants observed policy makers were primarily interested in the vocational rationale and the contribution of computers made to school standards, as for example measured in attainment tests and examinations, but teachers wanted to know how computers would support them in the everyday work they carried out in the classroom:

I think there were two agendas...at a sort of macro government level computers were becoming common in the workplace and it was important that young children learned how to use computers because it was going to be a work skill... I think that was

probably a key motivator for government level, but at an educational level it was...how can we use them to help children learn?’

This difference of perspective emerged when considering the impact of computers. Governments wanted to know if those with access to machines ‘did better’ than those without, educational researchers wanted to know more about the activities and thinking processes computers supported:

Still the government wants the pre-test/post-test experimental analysis to prove that a difference has occurred by using ICT. This doesn’t actually measure what the children probably learnt - better creating writing skills, argumentation, and interpretation of literary text. They don't measure those; they just used standard English tests.

The problem is of course that what governments often take as evidence are things like increases in exam scores those kind of things, we’ve all agreed these are not the things that ICT is going to improve. So we’re all interested in the soft end of things and that’s the really difficult bit to prove.

A difference of cultures

Underlying these criticisms of policy maker and policy making is a difference of culture which is set out in an accentuated, but not caricatured, form in table 7.1. Policy makers like announcements; clear and measurable targets and focus on the decision not the problematic nature of implementation. Participants see complexity at every stage. Policy makers see vocational value and impact on standards, participants want to know how the computer will affect what is taught and how it is taught. Policy makers are too often looking for:

a talisman something you could hang on to that could make you feel better a branding, a magic bullet that was going to solve everything.

Participants knew it was just not like that. Ironically by pushing too hard in an over prescribed fashion policy was having less impact than it could:

Actually what we've got I think is a bit of both... that teachers appeared to be getting confusing messages, and that the confusion, was one of the factors resulting in perhaps slower implementation, slower uptake, less impact than maybe the policy makers would have wished.

Ways forward

These differences of perspective are deep rooted but participants very much wanted to ‘broker a new kind of partnership with policy people’ and a ‘better connection between policy makers and researchers’. Participants had of course contributed to the development of policy in many ways; they had worked with government agencies and carried out small and large scale

research. They could mention policies which they felt they had influenced, for example support for networks of teachers, liaison with subject associations.

Domain	Policy perspective	Participant perspective
purpose of computer in school	vocational preparation; contribution to 'standards'	enhancement of what is taught and how it is taught, contribution to change
initiatives	high profile; easily understood; 'compelling'	timely, long term, complex
orientation	optimistic; 'magic bullet'	sceptical, aware of complexity
implementation	top down	bottom up / top down
driven through	exemplars; consultants; inspection	networks of support, including independent intermediaries
in service	showing how to do it; equipment prioritised over training	negotiating how to do it; training a priority
evaluation	multi methods, concern with experimental methods: 'do children with computers learn better?'	mixed methods but focused on understanding of teaching and learning process

Table 7.1: comparison of policy makers' and participants' perspectives

Further, they could name initiatives such as Creative Partnerships, and Best Practice Scholarships about which they had been enthusiastic:

One of the best things I think the government ever did was the Best Practice research scholarships and I am trying to revive a form of that at the moment, where the teachers could decide what they wanted to study within the school remit and had a little bursary to make those studies possible including the supply cover to go and see and work with other people. The original idea of best practice research scholarships is that teachers never left the school, why not do some intellectual work while you are continuing to teach thirty children, you know do it in parallel, so there are some very confused thoughts about what kind of spaces teachers need in order to change their practice.

Many hoped for a change from the current curriculum and assessment 'constraints' and 'obstacles':

I think we need to be more flexible... about the curriculum and as long we adopt a mentality which says your institution is subject to Ofsted inspections, league tables, parental interference, as long as the school has all these shadows hanging over it, it will be very difficult to change

This 'interchange of ideas' was a key theme and the majority of participants articulated that it was networks of people, operating at all the different levels that facilitated ICT policy. This process of change was understood by one to be:

...like a diamond type progress where you need to sort of open out and explore, experiment and all sorts, but then there comes a point where you need to distil that and refine it so that you're clear about 'right we now understand what we can get out of this, this is what we've got to do to go on'.

The key factor in the success of an initiative was the connection between the levels and layers and participation from multiple users:

We need more energetic exploratory workshop feeding links between policy makers and researchers and schools. But then you have to involve, teachers and parents and governors. They have all got to be part of it, because you can't change one little bit of this system... you need the involvement of senior managers, enabling things, these management people helped to make sure it gets embedded

Future scenarios

We have noticed in previous chapters disappointment in what has been achieved, one participant added wryly that, attending a conference in 1998, she was aghast to find the phrase 'we're on the launch pad':

What? We're on the launch pad? I'd been working on this since 1984; we can't still be on the launch pad! This was about 1998, so since then really my focus has been on why change hasn't happened and how you might make it happen.

The fact that change takes time led to a hopeful optimism by some ('you won't get the really great stuff everywhere, but you're getting some quite good stuff') but for others:

We don't seem to have got much beyond that... in some sense the saddest bit about ICT in teaching and learning is that many of the things you know would be really exciting, aren't happening for lots of children.

Several felt the wider cultural context was leading towards a more central and more creative use of ICT. Surprisingly the vocational argument for using ICT now brought with it an impulse for change. The wider agenda of globalisation and need for 'a highly trained ICT literate workforce' could steer policy into unexpected directions. Technological developments were so pervasive as to overcome even the most ingrained culture of schools and current assessment practices:

I am hopeful because I think that although structural change is very difficult, in the end the transformative power of technology is washing over, while policy people are phaffing around with setting up nice little projects... The transformation of the larger world, globalization, all the things that are happening, that's happening as chaos theory or complexity theory would say, things are spontaneously reorganizing themselves

around us and so we can't stop it, so in the end even the structure of secondary school, is not going to be able to stop it finally I think. Even the national curriculum, even GCSE, these things are not going to last forever, they seem like one of these things that will last forever but they won't. They cannot last forever so that's one thing to be said.

Summary

This chapter has drawn out two phases in policy making though noted consistency as well as contrast between them. It looks at the assumptions that participants make about change and contrast these to policy makers' concerns. The need for closing the gap between policy makers and educationalists, in the widest sense, of the word is drawn out and some thoughts on the future direction of policy are given.

The key question underlying this chapter is 'how has policy helped develop and constrained the use of computers in school?' Policy making has driven the use of computers, supported the resourcing of computers and provided the 'stick' for their use. However, policy has paid too little attention to support for teachers, has been too top down and this has constrained development.