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## Mind the gap: The creative conundrum

Senior politicians, including the Prime Minister, argue that it is vital to promote creativity and innovation throughout education. This was a theme of Tony Blair's electioneering speeches in the run up to the 1997 landslide. He made it one of the central messages of his Romanes lecture on education in 1999. Yet if the government were to design an education system to inhibit creativity, it could hardly do better. This was true of the last government though they had less to say about creativity in the first place. Governments throughout the world emphasise the importance of creativity, but often what they do in education suppresses it. Why is it that politicians argue for creativity but seem to act against it? This question goes to the heart of the debate about what it is to be educated in the twenty-first century.

There is a good deal of creative teaching and learning going on in the UK and elsewhere. But this is mostly despite the dominant policies rather than because of them. There are two widely acknowledged reasons for promoting creativity and innovation, both of them economic. First, technological developments are transforming the global economies. Keeping pace with international competition requires a constant flow of new ideas and the capacity to implement them. Second, business needs people who can adapt quickly to new challenges and changing circumstances. This much is standard political rhetoric. But these issues are more than rhetorical. They must be taken to the heart of government. In my view, they are taken seriously, but the implications are not being faced, at least not on the evidence of current policies.

Education has to do more than prepare people for the world of work. The British education system has always been tempered with broader social purposes, and rightly so. There have been times when philosophers of education and others have argued that education should never be seen in instrumental terms at all: that the aims of education are entirely intrinsic to it and should not be related to economic interests. However plausible these arguments may be within philosophy seminars, they run against the grain of parental expectations, the aspirations of young people and common

sense. In my experience, most people assume that being educated will have some bearing on being employable and economically independent. The issue is not whether education should relate to economic development, but how, and how its economic roles should be balanced with other priorities.

In the new economies, the nature of work and the balance of the workforce are changing beyond recognition. The technological changes that are now taking place bear serious comparison with the Industrial Revolution. In the last twenty years, and with increasing speed, there have been radical changes in the nature and the distribution of work. There have been fundamental changes in how business is done and who does it. The revolution in banking and financial services is just one example of many. The indications are that we have seen nothing yet.

The accelerating rate of technological change suggests that we are still at the ham radio stage of global information systems. Revolutionary research in nanotechnology is leading to the extreme miniaturisation of computer components. But this is not all. Rapid developments in the cognitive sciences are generating new insights about the workings of the brain. Genetics is opening up new horizons in the nature of life itself. These three scientific frontiers are beginning to merge. It is now feasible to anticipate the convergence of information systems and human intelligence; the development of computer-enhanced intelligence and of conscious machines. These are not ideas from science fiction but realistic projections based on current knowledge and rates of research and innovation. If this is not creating a social, economic and cultural revolution, it's hard to know what would.

Education is meant to be the process by which we enable people to engage with social and economic change. Governments everywhere have two responses. The first is to expand the amount of education that goes on. In the next thirty years, more people will be gaining formal qualifications through education and training than since the beginning of history. There are two reasons. First, there is an exponential growth in the demand for intellectual labour arising from the proliferation of new technologies. Second, there is a massive increase in the world population, particularly in the developing world. These two factors are combining to create an unprecedented demand for educational qualifications. The second strategy is to insist that standards must be raised. Of course they should, but which standards and why?

The essential problem is that the structure of our current education systems has its organisational foundations in the nineteenth century, and its intellectual preoccupations in the seventeenth. Before 1870, there was no national system of education. The system we have now evolved from a political need to face the challenges and consequences of the Industrial

Revolution. The industrial economy required a workforce that was roughly 80 per cent manual and 20 per cent professional. This is why the 1944 Education Act provided secondary education for all through two sorts of schools, grammar and secondary modern, and why the Act established the selection procedures of the 11-plus.

The point of the 11-plus was to find the 20 per cent of children for the grammar schools. It was not a test of general intelligence but of the particular abilities needed for the academic curriculum of the grammar schools. That curriculum was heavily shaped by the classical traditions in education dating back through the medieval grammar schools to antiquity. It was painfully blended during the eighteenth and nineteenth centuries with rationalist ideas in science and philosophy that had spread throughout Western culture since the Enlightenment. Academic ability is very important. But it is a long way from being the whole of human intelligence. For specific historical reasons, we have become completely preoccupied with it.

Within this dominant conception of education and intelligence, creativity has become hopelessly stereotyped. First, creativity is associated with particular types of activities, mainly the arts. For that reason, it is thought to be marginal to academic and economic success. Second, only certain sorts of people are thought to be creative. As a result, it's often thought that creativity can't be taught. Third, creativity is thought to involve free and spontaneous behaviour. In that respect, it's sometimes thought to be the opposite of discipline and high standards. On all counts, promoting creativity seems to strike some people as at best irrelevant to the standards agenda, and at worst positively disruptive of it.

At one level, the problem is that the government is completely preoccupied with two other priorities. The first is raising standards of literacy and numeracy. This is clearly an important priority and standards should be as high as possible. On taking office, the government committed itself to achieving a set of specific targets within its first term. The Secretary of State pledged his job against achieving these targets. One result is that ministers are preoccupied with them to the exclusion of other equally important areas of development, which they fear might distract from or conflict with the literacy and numeracy targets. I think this has been the case with the creativity agenda.

The second reason is less direct. Over the past fifteen years, successive administrations have been pressing for more public accountability in education. There can be few serious arguments against the principle of accountability. Education is a massive area of public expenditure in which the future of the country is invested. The period between 1944 and 1979 saw

an extraordinary degree of freedom for educators. The good work was undoubtedly mitigated by some bad. The modern drive for accountability was triggered by the oil crisis of the early 1970s and the subsequent recession. But accountability is a sound principle in any circumstances. The problem is in the forms that accountability takes in education and in the distortions rather than improvements in practice that result. Accountability is conducted as if it were an accountancy exercise and education were a manufacturing business rather than a social service. Accountability is being implemented through forms of assessment that prioritise certain types of educational outcome and forms of teaching.

The pressures of the literacy and numeracy strategies in primary schools combined with the pressures of accountancy models of accountability throughout education are stifling creativity and innovation in many areas of the curriculum. These are the symptoms of the problem for the creativity agenda. But the causes are more fundamental. They are ideological. They are deep in the academic assumptions that have dominated our view of intelligence in education since the state system was formed, and in the models of supply and demand from education to the industrial economy that have influenced the structure of qualifications.

In the 1960s and 1970s, various attempts to change the balance of education were made from many different theoretical directions. The resulting tensions were often described as a conflict between traditional and progressive education. The whole debate on education is being hampered by the consequent oversimplification of the issues. Traditional education is thought to be one that promotes high academic standards and is conducted by teachers exercising intellectual rigour. Progressive education is associated with free expression and with children learning by discovery while well-intentioned teachers look on benignly. For some critics, progressive education has been closely associated with the whole idea of creativity. Politicians promote the idea of creativity, but some of them obviously suspect that too much creativity in classrooms may have been the problem in the first place, as result of which they now have to raise academic standards.

David Blunkett, Secretary of State for Education and Employment, is clearly concerned about the creativity agenda and wants to act positively. In 1997, he commissioned me to form The National Advisory Committee on Creative and Cultural Education to look at the principles and practical implications of developing creativity through education. The NACCCE brought together leading scientists, artists, business people and educators. Our report, *All Our Futures: Creativity, Culture and Education*, was published by the DfEE in June 1999.

We say why creativity is a vital priority for education, look at what the problems are now and set out the conditions under which it can flourish. We set out to counter many of the existing misconceptions. We argue that creativity is a function of intelligence and is as relevant to science, technology and the humanities as to the arts; that everyone has creative potential but that developing it requires a balance between skill and control and the freedom to experiment and take risks. Developing creative abilities calls for sophisticated forms of teaching and for relevant forms of assessment and accountability. Properly done, developing these wider abilities complements academic standards.

The report has had an extraordinarily positive response in business as well as in education and across many different subject areas. It has been reprinted several times to meet demand. Because of difficulties in getting hold of the report from the DfEE, a consortium of private funders and professional associations has printed and distributed 100,000 copies of a summary. As yet, there has been no considered, public response from the government to the issues the report raises. There have been various initiatives in relation to specific practical recommendations, but no substantive engagement with the core arguments.

There is now an urgent need for a genuine discussion about the aims of education as we move into the post-industrial economy. Our present system was designed to meet the particular needs of industrialisation and for this it adopted a particular intellectual model. The world economic context is now completely different and for this we need a more generously conceived model of intelligence. This is not a question of whether academic standards should be promoted, but how they fit into a broader conception of educational achievement. It is not a question of arguing for the arts in place of sciences, but for a balanced curriculum in which all of these disciplines have related roles.

We cannot plan an education system for the future on principles of supply and demand that belong to the past. As long as the debate in education is seen simplistically as a contest between traditional and progressive methods, creativity or rigour, the fundamental objective of developing an education system for the twenty-first century will be thwarted. These are not simply questions of standards or accountability, but of purpose and vision.