



technology, children, schools and families

## **State/market/third sector**

**Richard Sandford**

**Futurelab**

Sandford, R, 2009, *State/Market/Third sector*, Futurelab, Bristol, [www.beyondcurrenthorizons.org.uk](http://www.beyondcurrenthorizons.org.uk)

### **Introduction**

This report considers the relationships between the state, the private sector and the third sector in the provision of education. It looks at some of the factors that influence these elements and the relationships between them – in particular, digital technologies – and explores some of the ways changes in these factors might influence the way education delivery is structured over the coming decades to 2025 and beyond. In doing so, it draws largely on a set of reviews written for the Beyond Current Horizons programme, expert interviews and discussions from a workshop event. A summary of these reviews and activities can be found in the appendices.

The primary questions within this report centre on the actors whose actions constitute the educational landscape: who determines educational content, who is managing educational institutions, who is providing educational experiences, who is developing educational resources, what the funding mechanisms are that pay for this, and who is responsible for ensuring access to education. These address educational provision in its broadest sense, touching on independent, supplementary and alternative education, work-based learning, and paying particular attention to emerging forms of educational provision that have been enabled through new forms of technology.

It was noted by a number of review authors and interviewees that the lack of data that would support a comprehensive investigation into the relationships between state and non-state actors in the education arena was surprising, given the centrality of these questions to debates on education and its future direction. In part, this appeared to be due to the commercially sensitive nature of data on factors within the education market (though it should be noted that interviewees working for educational suppliers were extremely generous in sharing the information available to them). This sensitivity is recognised here in leaving interviewees' views and comments unattributed. To some degree, however, this absence appears to reflect a genuine lack of investigation, rather than a lack of transparency. There are a number of possible factors that might contribute to this state of affairs. Within some research communities there are dominant narratives of state responsibility and corporate activity that are easily left untroubled. There are other actors within the public sector who may not feel that it is in their remit or their interest to trouble these narratives, or to reveal complex relationships within the market that may be misunderstood as a result. Information that would be necessary for a full

understanding of the area may be held within organisations and sectors which lack a tradition of engagement with academic research or cultures of openness. Any thorough academic investigation would require a genuinely interdisciplinary effort, as relevant topics are addressed by a range of disciplines that may not have a history of collaboration. These factors are presented speculatively and are of course not exhaustive.

This report offers:

- An overview of the contemporary educational landscape in England, examining responsibility for access, curriculum authorship, production of educational materials, management of educational institutions, assessment and funding.
- An exploration of those features of the landscape considered likely to persist over the relevant timescale.
- An outline of some emerging trends within the provision of education whose direction of travel seems relatively clear.
- A set of related uncertainties, examining the different ways in which these emerging trends might plausibly develop.
- A short selection of implications arising from the trends and uncertainties discussed in this report, and some possible actions that might be considered as responses to the challenges they offer.

Some of the emerging trends identified here arose from discussions during the workshop event and have been drawn from a summary report written by Helen Beetham, to whom thanks and acknowledgement are due.

The various trends and uncertainties described here should be understood as factors that the work of the review authors suggests are worth continuing to pay attention to over the coming decades, rather than a comprehensive or exhaustive account of all factors that act within education or that will shape its future. As with any attempt to discuss future events and developments that have yet to occur, these trends and uncertainties are not certain to play out in the directions suggested here, nor is it impossible that other developments not addressed within this report will play a greater role in the future of education than currently seems likely. There are no predictions here, only likelihoods or possibilities.

It is worth briefly marking a couple of points regarding language. First, the distinction between learning and education, where learning can be considered a personal process of change and development, and education can be seen as an intentional social project executed with specific goals. As a social project, the practices of education are subject to the forces that shape all of society and will change as they change; learning processes, in contrast, change over a much longer timescale. While these two terms are often used interchangeably today, when considering the longer term future it is more likely that we will see changes in the ways we educate rather than in the ways we learn.

Second, throughout this discussion the terms “delivery” and “provision” are employed: these are terms used to describe the institutional organisation of education rather than to imply a particular method of education. In other words, it is not suggested that it is possible to ‘deliver learning’, nor that learners are best thought of solely as “end users” of what is delivered.

## **Section 1: The contemporary landscape of relationships between state, private and third sector provision in education**

The purpose of this section is to offer a broad outline of the contemporary education landscape, and to begin to chart some of the interactions between the state, private and third sector organisations that take place within it. It is clear from the work of the review

authors that the divisions between the state and other actors are far from distinct. The notion of an education system wholly defined and provided by the state alone, or of privately-funded schooling that exists entirely independently, are each belied by the complex interchanges that constitute the operation of the various education markets as currently seen. The material produced through the reviews and interviews that addresses these interactions is examined below, under the following areas: responsibility for access, curriculum authorship, production of educational materials, and management of educational institutions, assessment and funding.

### **Responsibility for ensuring access to basic educational needs**

There are strong cultural and legal frameworks that define schooling, including the individual child's entitlement to schooling, and the responsibility of the state to provide it. These frameworks are now firmly embedded in European law and international charters. One's identity as a subject of the state is recognised as being established in part through schooling, and the frameworks that support this are likely to remain in place. From a policy perspective, an important context for examining the current landscape is the 2006 Education and Inspections Act<sup>1</sup>. There are a few key features of the Act that are worth highlighting: the emphasis on "empowering" schools by "devolving as much decision-making to them as possible"<sup>2</sup>, the conception of Local Authorities (LAs) as 'commissioners' rather than 'providers' of education services with a duty to promote "choice and diversity", and the efforts to make "links with external partners" available to all schools, all support the notion that responsibility for the delivery and constitution of education is not located within the duties of the national government but is being moved towards schools. Acknowledging, or encouraging, the contribution of external partners is something that creates room within policy for the various interactions between schools and other groups described below. Responsibility is still acknowledged, however: the state still has a role in ensuring "fair access" and moderating covert selection processes. It is the practical considerations of providing education that have moved, rather than the duty to ensure access to education: the state acts as regulator and mediator of education provision, ensuring basic motivations for a national education settlement are met, but aims to do this through working with other agencies, whether for-profit (or other) groups from the private sector or third sector organisations (faith, social and parent groups). In particular, the state has an obligation to employers to ensure that they are able to contribute towards the provision of "skills" amongst the workforce: the Leitch review also gives the government an opportunity to cast those within education as "customers"<sup>3</sup>, a relationship between learner and provider that draws on the language of the private sector.

Within the reviews and discussions that took place, some basic principles underpinning the provision of education were identified. Most fundamentally, contributors identified a moral right of an individual to education, and a moral obligation on the part of the state to provide access to education. In addition to this moral contract between citizen and state, there are societal needs served by a national educational settlement: the need for individuals to form an identity as a citizen of the state and the need for the development and establishing of social values and norms. These processes require some form of recognition, in the form of certification and accreditation of individuals who have participated in a process of education, and providing this recognition is another social role fulfilled by education.

There are other groups with an interest in and responsibility for ensuring access to education. Families have a number of well-recognised responsibilities towards children's learning. Most straightforwardly, they are expected to support their child's learning in

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<sup>1</sup> [http://www.opsi.gov.uk/Acts/acts2006/ukpga\\_20060040\\_en\\_5#pt3-pb3-l1q39](http://www.opsi.gov.uk/Acts/acts2006/ukpga_20060040_en_5#pt3-pb3-l1q39)

<sup>2</sup> <http://www.dcsf.gov.uk/educationandinspectionsact/docs/Guide%20to%20the%20Education%20and%20Inspections%20Act.pdf>

<sup>3</sup> <http://www.dius.gov.uk/publications/worldclassskills.pdf>

school through provision of a home environment in which homework can be undertaken, and through a wider respect and enthusiasm for learning: the desire to see their children launched on successful life paths is translated into a responsibility to invest in their learning 'privately' within the family, as well as publicly through school. Many feel the need to do more to provide access to an education they feel is best, whether by relocating to an area with well-regarded schools, or by funding their children's education directly themselves, and this reflects a more general cultural expectation that families actively support and promote learning for their members. Traditionally this support has been assumed to be for children's learning, though increasingly families will need to support learning of all their members.

Employers, too, are recognised as having a stake in the provision of education, though it is debateable how much of a responsibility they have to provide educational opportunities directly themselves. As a group their interests are explicitly acknowledged by the government through definitions of education that focus on the eventual ability of learners to contribute to the economic wellbeing of society, and through the provision of vocational education that is responsive to employers' stated needs. Employers have had a large degree of influence on vocational qualifications, though increasingly the need for training that meets wider social needs rather than solely the needs of employers is recognised by policymakers. This is part of a more general tension between identifying and investing in long-term skills (often transferable and more in employees' interests), and meeting immediate short-term skills gaps (often specifically related to a particular role). Encouraging companies to invest directly in training staff appropriately, either in-house or through external suppliers, is one approach, though this would make it no easier for those not in employment to gain skills, and it may be difficult to find appropriate training in some regions.

Contributors felt that there is, perhaps more strongly in the UK than in other European countries, a strong discourse of individual responsibility for taking up learning opportunities, what might be thought of 'capitalising oneself' with knowledge and capabilities. Schools are becoming sites for the inculcation of personal responsibility as a more general social value, encompassing health and well being, citizenship and political participation in addition to more traditional, subject learning. Some contributors felt that the increasing diversity of supply models across the sectors was likely to strengthen the argument for individual responsibility and self-management. This individual responsibility is most noticeable within the context of membership of the workforce and the concomitant necessity for people to ensure they possess the necessary skills for such membership, but is also resonant with arguments that make a social case for learning and personal development. Many learning activities that seek to further this take place outside formal educational settings, and are often described as constituting "informal" learning by researchers and commentators, though they may still be structured and require a degree of commitment from the learner. These learning experiences are likely to interact in some way with the state, private or third sectors when they occur, perhaps through the simple exchange of capital in exchange for tuition, through the use of a facility funded by one of these sectors, or to expedite the learner's entry into a more formal learning environment.

### **Determining the curriculum**

Private or independent schools are not obliged to follow the National Curriculum, though the majority work towards recognised national qualifications and so there is a degree of overlap. Little of the material gathered through the reviews and interviews addresses the independent sector specifically, and insofar as these schools are independent their examination might be thought less relevant to describing the relationships between state, private and public sectors.

State-funded schools in England follow the National Curriculum, designed and set by the state through the Qualifications and Curriculum Agency, and assessed through a series

of national tests until the age of 16, when learners can sit national examinations. This curriculum is developed in partnership with other government agencies and external groups representing adult learners, vocational training, employers' needs and other stakeholder priorities. It represents government aspirations for learners and their contribution to society, reflecting wider policy directions, such as a commitment to remaining competitive within the "knowledge economy" or the inculcation of a sense of citizenship, as well as aiming to establish essential skills such as literacy and numeracy. Over the twenty years of its existence the National Curriculum has responded to social changes and attempted to meet new needs, as instanced by the introduction of functional mathematics, the recent focus on scientific literacy and the establishment of technological subjects such as Information and Communications Technology (ICT).

Companies with an interest in the education sector, such as publishers and technology providers, can influence the development of the curriculum in a number of ways. Most directly, there are close links between individuals from education technology companies and policy-makers (for example, through the Intellect group<sup>4</sup>) which allow these representatives of the private sector to offer their perspectives on policy direction, and government to share current thinking. More broadly, the private sector as a whole shapes understandings of the economic context in which education is operating, works to reinforce the notion that the education sector is in the service of the country's economic wellbeing and often seeks to influence perceptions of appropriate future strategic directions for learning and education through publishing white papers, sponsorship of events and initiatives and funding independent research into learning and technology<sup>5</sup>.

A particularly visible site of interaction between the public, private and third sectors is the academies programme, originally a programme in which publicly-funded schools received sponsorship from private firms or individuals. Intended to raise standards in inner-city areas, the involvement of the sponsor was explicitly intended to enable them to embed their values (assumed to be focussed on success and aspiration) within the ethos of the school, and the injection of private capital was originally intended to offset the "deprivation"<sup>6</sup> of the inner-city locations in which they were based. Private sector sponsorship has declined since the introduction of the programme, however, and the emphasis is now on attracting sponsorship from universities and the third sector, whose specialist knowledge it is thought will support the development of an academy's own specialism: the minimum £2million contribution has been waived, and the emphasis is now on sponsors contributing educational expertise and demonstrating a commitment to social mobility<sup>7</sup>, as demonstrated by the engagement of the RSA<sup>8</sup> and the charity ARK<sup>9</sup> with the academies programme. A number of new academies are not the 'failing' inner-city schools that were the original target, but are formerly independent schools seeking greater financial stability. Regardless of the nature of sponsors, they are accorded a part in the development of the curriculum each academy follows, provided core elements of the National Curriculum remain.

A small number of early sponsors of academies attracted controversy for their supposed embrace of contested subjects such as 'intelligent design', prompting public concern that there were possible tensions with accepted science curricula and mainstream thought. Some academies are explicitly schools with a religious character, or 'faith schools': around a third of state-maintained schools have a religious character, and this naturally informs the curriculum they present to their learners.

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<sup>4</sup> <http://www.intellectuk.org/>

<sup>5</sup> Futurelab has received funding from Microsoft's Partners in Learning scheme to support its Enquiring Minds research programme

<sup>6</sup> [http://www.standards.dfes.gov.uk/academies/what\\_are\\_academies/?version=1](http://www.standards.dfes.gov.uk/academies/what_are_academies/?version=1)

<sup>7</sup> "Academies, Trusts and Higher Education: Prospectus": DFES 2007

(<http://www.standards.dfes.gov.uk/academies/pdf/AcademiesTrustProspectus.pdf?version=1>)

<sup>8</sup> <http://www.thersa.org/projects/education-legacy/rsa-academy---tipton>

<sup>9</sup> <http://www.arkonline.org/>

Private sector organisations directly providing education that focuses on their particular field or practice are in a position to centre curricula on their specific needs, tying learning much more closely to employment within a particular area than under more general learning activities. This might provide learners with an advantage insofar as they can be confident they are learning skills and dispositions that are appropriate for their employer, or eventual employer, but may limit the range of employers for whom they might work if what they learn is tied too closely to a particular company's practices.

For companies engaging with education in this way, the issue of intellectual property becomes important, as engaging learners with their particular domain and practice might necessarily expose their IP to a greater extent than they would prefer: these firms need to balance the benefit of increasing the pool of employees or potential employees with appropriate skills with the difficulty of protecting their IP. More broadly, education can be seen as a site for the generation of new IP. The materials supporting teaching and learning produced by educational publishers constitute an important source of IP from a business perspective. Longer-term, many universities have defined sites of innovation within their organisations specifically for the generation of intellectual property (for example, Cambridge Enterprise and Imperial Innovations). However, while the materials used to support teaching a particular curriculum might be protected intellectual property, no mention of protecting curricula themselves was made within the research underlying this report.

### **Producing educational materials**

The focus here is on educational materials that rely on or are disseminated through digital technologies, as this was emphasised in the reviews and interviews, but it ought to be noted that educational publishers themselves observe no distinction between "old media" publishers and "new media" publishers, with most offering both paper and digital versions of textbooks and support materials, as well as software. Within the reviews and interviews, no mention was made of toys, physical models or demonstration devices, technical equipment such as environmental sensors, or tangible or haptic technologies, for example: this reflects perhaps a current general conception of technological educational materials that revolves primarily around networked computers and the software that runs on them, though a number of the interviewees represent companies that sell products from several of these categories.

There is a general agreement within policy and industry that educational provision operates within a market, with a choice of providers and competition between suppliers. While in many respects this is a more accurate conception than imagining educational provision to flow from the state, it was noted by some contributors that it might not be recognised as a true market by publishers and technology providers working in sectors outside education. Government policy (for example, efforts to increase the number of computers in schools, or to integrate different data-management systems across institutions) and the injection of capital from a central source (through, for example, the e-learning credits scheme) have a distorting effect on the marketplace, determining needs and objectives, and although the government does not act as a central purchaser it exercises what Sefton-Green describes as monopsony power, shaping the focus and direction of suppliers. Some interviewees suggested that the education sector in the UK has also been used historically to stimulate the growth of technology-related skills across a wider national arena, driving domestic and corporate uptake of computers and related technologies. However, it was also noted that the private sector must necessarily be involved in the provision of technology as there is little government scope for becoming a manufacturer or software developer.

The purpose of the technology which is sold to schools is often to support administrative and management processes (pupil tracking, payroll administration, asset management and so on), rather than directly supporting learning. Rhetoric around the capacity of technology to support learning often emphasises the ways in which it supports individual

development and offers the possibility of 'personalised' learning: however, information technologies are powerful tools of standardisation and massification, offering a great degree of bureaucratic control. This second, less visible use of information technology accounts for a greater proportion of schools' software spending than software explicitly focussed on supporting learning (roughly around 13–15% of total technology spend within the schools' market, as opposed to around 5–7% for learning software: the remainder is largely spent on hardware).

These figures are vague and uncertain, reflecting the difficulty of examining this market and the hidden nature of some associated costs. For example, in some schools technicians are employed in-house (and so feature as staff), while in others technicians are external and their cost is part of services provided by an external supplier. For universities, the cost of contributing to an open source project might be greatly reduced if students carry out the work as part of their course than if a member of staff does the same work. These blurred lines illustrate the muddy nature of the interactions between technology and education, and suggest that viewing "technology" as a separate domain is not always practical.

There are a number of different kinds of private-sector suppliers of educational technologies operating in England at the current time. There are large consumer electronics and software development companies for whom education is a small part of their business (for example, Apple, Oracle or Microsoft) and for whom the motivation for engaging in the education market was reckoned by contributors to be less profit than an opportunity to raise brand awareness, increase the familiarity of future consumers with their products and philosophies and to address issues of corporate social responsibility. As an adjunct to this group, there are some companies who, while not directly concerned with educational provision or technology, may shape its delivery and influence expectations of learners and parents through efforts intended to fulfil corporate social responsibility objectives (for example, Tesco's Computers for Schools programme, or Morrison's Let's Grow scheme). Farook notes that there is often considerable resistance to these programmes if they are perceived as inappropriate. Where the benefit to both school and firm is clear and equal (for example, in the provision of access to branded sports equipment by students) this resistance may be lessened, and it seems clear that this relationship between state and private sector will continue to be developed. More subtly, these efforts can shape wider societal expectations around (for example) access to technology for learners.

There are a small number of large companies whose focus is on the education market, most visibly the international educational publisher Pearson and the UK-based hardware supplier RM. These two organisations have diversified their activities within England in recent years, with RM moving into the supply of software and a greater range of peripherals, and Pearson acquiring one of the national examination boards, Edexcel. In general, educational publishers appear to be moving away from the simple provision of hardware and software into supporting assessment and long-term service provision (particularly with respect to the Building Schools for the Future programme). It was suggested that over the coming years fewer large companies will be operating across a range of what were previously discrete markets, and a range of smaller companies will establish themselves by identifying and actively targeting particular niche areas (the publisher Rising High was cited as a strong example of this approach). For commercial companies, there is greater interest in maintaining their close relationships with schools rather than the FE or HE sectors, as the standardised nature of schools and some FE colleges makes it possible to create content that can be used (or delivered) on a national scale, as opposed to universities which have a tradition of creating their own intellectual resources.

There are concerns around the role played by these large firms and their relationships with local authorities and policy makers, with one interviewee describing them as a

"cartel". Publishers and developers shape learning through the materials and technologies that are made available to educational institutions, influencing expectations of teaching and procurement staff and necessarily shaping teaching practice, notwithstanding their claims to be responding to teaching practice. These claims are genuine and supported by the number of employees coming from local authorities or schools with a more nuanced and sympathetic understanding of education practice than a caricature of the aggressive salesman would imply. Still, the relationship between schools and suppliers has a circular nature, with schools to some extent relying on these firms to inform them of their purchasing options and firms relying on schools to communicate their purchasing needs: this is underlined by the claim of one interviewee that there are many fewer people involved in the education technology community outside schools than might be expected, with the same individuals moving between local authorities, government agencies and private companies.

One contributor suggested that schools are comparatively "unsophisticated" consumers of technology, being used to receiving subsidies and having different procurement patterns and expectations to commercial firms. Schools' apparent failure to purchase technology in the same way as a commercial business, apart from reflecting the fact that schools have not traditionally been run along the same corporate lines, may also reflect a pre-existing set of attitudes towards technology that arose from the early days of using technology with computers, when a "hobbyist mentality" was more of a pre-requisite for engagement with technology inside or outside schools and a cottage industry of software developers and distributors arose.

Two kinds of ethos towards technology in schools seem to be illustrated from the interviews and reviews. On the one hand it might be suggested that there is an acceptance of the ready-packaged and quality-assured software and hardware provision from large corporate players such as Pearson and RM, where technology expertise is assumed to be located outside the school and procurement decisions that rely on such expertise are happily passed to representatives or proxies of the market, reflecting the lack of time or enthusiasm within an institution for engaging with such decisions themselves. On the other hand, it could be said that there are still vestiges of a tradition of technological experimentation and development that locates expertise within the school (perhaps within individual teachers), perhaps seeing itself as linked to the university tradition of technological development. Although this second "DIY" tendency is vocal and engaged, and informs much of the aspirational debate amongst researchers and policy-makers, there is doubt over the effectiveness with which teachers are recruited to its standard, and there is little indication within the work examined here that it will become a mainstream attitude within schools.

This hobbyist or DIY attitude might in some ways be seen as part of a wider movement supporting the "open source" creation of computer software. On a practical note, much open source software is significantly cheaper than its commercial equivalents and benefits from the presence of associated user communities. This is mainly relevant to primary and secondary education: HE has a much more familiar relationship with open source software, with HE institutions often acting as centres for the use and production of open source material. The notion of "openness" has been a productive nucleus around which to collect other instances of "open" activity: for some academics, placing limitations of copyright and access on their work slows research and is counter to the spirit of academic endeavour, while for learners there are an increasing number of institutions offering access to content and accreditation, usually using web-based tools<sup>10</sup>.

It is not only "open" approaches to learning that make use of digital technologies that enable remote communication. Many companies offer home tuition to school students via

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<sup>10</sup> For example, the Open University's OpenLearn project (<http://labspace.open.ac.uk/course/view.php?id=4341>), itself part of a wider European effort (MORIL), or the MIT Open Courseware initiative.

webcam sessions with remote tutors (for example, TutorVista and Global Scholar). The tutoring model is still based around real-time dialogue but the virtual presence technology allows (typically US) learners to take advantage of lower tutoring costs in other parts of the world (for example, in Singapore). There are also a handful of schools that are encouraging their teachers to develop online tutoring skills and are reaching out to a wider population with paid-for online provision. Online tutoring is therefore an opportunity for schools to participate in the digital education marketplace and to redefine their own communities, as well as a source of supplementary or even competing services.

There are a number of sites not affiliated with formal learning institutions that act as places to access materials explicitly intended to support learning. Some are wholly concerned with learning, whether academic or non-academic (for example, the School of Everything<sup>11</sup>, 5min<sup>12</sup> or Instructables<sup>13</sup>), while others, such as YouTube<sup>14</sup>, are more agnostic platforms that have become useful for people wanting to share techniques, advice or coaching. Collaborative opportunities online, such as blogs, message-boards, public wikis and so on, have become established as useful locations for the exchange and construction of knowledge with peers.

### **Managing educational institutions**

The most high-profile interaction between the state and the private sector with respect to the management of schools in recent years is the Private Finance Initiative (PFI), in which the construction and management of public institutions is financed and delivered by consortia of private companies, who receive a revenue stream from the state over a fixed period of time. As an investment mechanism it has been widely employed across the public sector, perhaps most visibly for the provision of health services. PFI projects represent the largest investment of private capital in education currently, though as a procurement approach it has been strongly criticised on both economic and ideological grounds. There are practical difficulties associated with the approach: local authorities have not always had the skill to manage a PFI project successfully, and the recent economic climate has made it hard for consortia to raise capital. However, the same economic pressures make it unlikely that new public projects will be able to go ahead without the support of the private sector, and for now the PFI approach is sufficiently embedded within procurement processes for it to continue to be a favoured approach to funding infrastructure projects.

PFI engagement with education projects tends to extend as far as the provision of services related to the facilities constructed under the contract: this may involve funding staff on site, but their role is usually concerned with maintenance and service provision rather than directly with educational activities. Academies, as described above, are another way of involving the private sector in the provision of publicly-funded education, and the sponsors often make a greater contribution to the management of the school itself, appointing representatives to the governing body, recruiting members of the senior management team, contributing to the design of the curriculum, and directing to a large extent the ethos and vision that underpin the schools' activities. The engagement of sponsors of academies with the management of the school is much greater than that of PFI consortia members.

Both PFI schemes and academies are established features of the education landscape in England. Less common is the management of maintained schools by for-profit companies, such as GEMS<sup>15</sup>, Edison<sup>16</sup> or Kunskapsskolan<sup>17</sup>. These organisations differ

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<sup>11</sup> <http://www.schoolofeverything.com/>

<sup>12</sup> <http://www.5min.com/>

<sup>13</sup> <http://www.instructables.com/>

<sup>14</sup> <http://www.youtube.com/>

<sup>15</sup> <http://www.gemseducation.com/>

<sup>16</sup> <http://www.edisonschools.com/> in the US, <http://www.edisonlearning.net/> in the UK

from traditional independent or private schools in that their revenue is derived through district-wide contracts with state agencies for the management of publicly-funded schools. The three named here represent three different ways of engaging with the provision of public-sector education. In Sweden, Kunskapsskolan manages schools for profit through a government voucher scheme: the company is entering England as a non-profit sponsor of several academy schools. Edison Schools in the US originally managed publicly-funded schools on behalf of district authorities, though poor financial and educational results have led to their specialising in service provision rather than whole-school management<sup>18</sup>. In England, Edison (as Edison Learning) have been contracted to provide school improvement services in Essex and North London, providing teaching staff as well as training and management. GEMS is based in Dubai and manages a string of independent schools globally aimed at the expatriate market, including England, teaching local curricula and the National Curriculum.

These for-profit organisations are qualitatively different providers of private education than traditional 'public schools', with the latter's reliance on social networks to provide legacies and donations in addition to tuition fees received from parents. They are also multinational, reflecting the increasingly global nature of the education market. Many domestic education providers are beginning to expand internationally, using an institution's brand and relationships with locally-based institutions to establish sites of education delivery overseas, either as a profit-making exercise or, more commonly, to support recruitment and intake among domestic institutions. Increasingly HE and FE institutions are competing globally rather than nationally, often against universities with a greater funding base, and awareness of this perhaps encourages a more enterprise-oriented disposition. Currently, international demand is for an 'Anglo-Saxon model', though it should be noted that this does not privilege providers from traditionally Anglo-Saxon backgrounds, and global Englishes are often more relevant to consumers than Standard British English. This tendency to equate an international outlook with economic globalisation is filtering down to school level: the Specialist Schools and Academies Trust runs an International Business Partnership Network<sup>19</sup> encouraging financial partnerships between schools in different countries that are supported by local businesses, while some schools are keen to promote the development of skills supposedly demanded by a technologically-enabled global economy<sup>20</sup>.

Independent education provision is under pressure from the redirection of some parents' resources towards supplementary private tuition. The cost of such tuition is decreasing, with low-cost providers often following a model established overseas and offering affordable tuition in supermarkets and shopping malls following the pattern established in Singapore, Hong Kong and the US. Supplementing state education with private tuition is an increasingly legitimate part of mainstream provision, with tutoring for failing pupils offered by the government and Aimhigher funding used by some schools to provide tuition for pupils applying to Oxbridge.

There are a number of other minority approaches to school management. Most visible are state-funded schools run by organisations with a religious character, or faith schools. These are maintained by local authorities, with infrastructure owned and managed by a group – often a charity – with a religious focus, who have representation on the governing body. Staff and admissions may be appointed by the local authority or by the governing body, depending on the school's voluntary controlled or voluntary aided status. Faith schools are valued by some outside the faith community for their supposed

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<sup>17</sup> <http://www.kunskapsskolan.se/foretaget/inenglish.4.1d32e45f86b8ae04c7fff213.html>

<sup>18</sup> See for example, <http://online.wsi.com/public/article/SB112604287494033169.html>, <http://www.nytimes.com/2002/07/16/us/complex-calculations-on-academics.html> and Saltman, K. (2005), "The Edison Schools: Corporate Schooling and the Assault on Public Education" Routledge (ISBN: 978-0-415-95046-6)

<sup>19</sup> <http://www.ssat-inet.net/aboutus/sponsorus/ibpn.aspx>

<sup>20</sup> For example, Sir Bernard Lovell School in Bristol: <http://www.sirbernardlovell.s-gloucs.sch.uk/v4/internationalism.php>

emphasis on broad social values and high levels of achievement, though public and political concerns regarding ethnic or secular segregation, religious extremism, social integration and the possible lack of accountability remain, possibly leading to greater scrutiny and regulation in future.

Foundation schools place a similar emphasis on the contribution of the governing body to the management of the school, with the local authority funding the school and the governing body owning the infrastructure and employing staff. Foundation schools may be faith schools, though in practice few are<sup>21</sup>: the primary advantages for schools in having foundation status are greater control over management and admissions policies, and a more equal relationship with local authorities. The structure also allows groups traditionally not involved in the direct provision of formal education to manage a school, and there are examples of parents and community groups taking this opportunity<sup>22</sup>, allowing a greater focus on issues of local concern, perhaps responding to a lack of school places, or a desire for stronger ties between home and school.

Foundation schools and academies represent two ways in which the third sector can manage and direct the provision of education. Another approach has been developed by the Young Foundation with the Studio Schools scheme<sup>23</sup>, which departs from the usual way in which 14-19 education is structured by conceptualising the institution as a cluster of student-led businesses, employing students, teachers and non-teaching staff with expertise in business: the focus is on developing general skills and dispositions that support entry into the workplace and an entrepreneurial attitude. The scheme has been recognised by the present government as an example of the middle way between full privatisation of education on one hand and centralised state delivery on the other that it believes best promotes the conditions for "innovation"<sup>24</sup>.

Education does not necessarily have to happen in a school or formal institution: there has always been a minority of children who are educated outside the formal system, most often at their home. Home schooling presents a direct challenge to the state's ability to deliver its responsibilities and commitments as outlined above, particularly in light of the growing emphasis on schools as part of a system of care for children in England and Wales. This is illustrated by the aims of ongoing Elective Home Education Review chaired by Graham Badman (to be published spring 2009<sup>25</sup>), which is investigating whether councils are able to discharge their duties of care to children outside the school system, whether home schooling can account for the level of education children receive, and to what extent the curricula addressed within home learning environments is aligned with government policy such as Every Child Matters.

While it is difficult to provide an exact figure for the number of children schooled at home (estimates vary from fewer than 10000 to over 50000), there seems to be general agreement that numbers are gradually increasing. One possible factor in this growth is widely reckoned to be the increasing availability of learning tools and materials accessible online. Indeed, there are a small number of independent schools existing entirely online, offering timetabled lessons where interaction with teachers and classmates is through messageboard, voice over IP and video-conferencing software. While the mechanism of interaction may be novel, an emphasis on the traditional nature

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<sup>21</sup>"Pupil characteristics and class sizes in maintained schools in England, January 2008" DCSF 2008 ([http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000786/SFR\\_09\\_2008.pdf](http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000786/SFR_09_2008.pdf))

<sup>22</sup> For example, the Bolnore School Group (<http://www.bolnoreschoolgroup.org/>) and Elmgreen Sceondary School (<http://www.elmgreenschool.com/>)

<sup>23</sup> <http://www.youngfoundation.org/home/themes/studio-schools>, <http://launchpad.youngfoundation.org/fund/learning-launchpad/events/studio-schools>

<sup>24</sup> Speech by Gordon Brown, May 2009 (text at <http://www.number10.gov.uk/Page19209>)

<sup>25</sup> [http://www.govtoday.co.uk/index.php?option=com\\_content&view=article&id=354:morgan-action-to-ensure-childrens-education-a-welfare&catid=52:sustainable-communities&Itemid=21](http://www.govtoday.co.uk/index.php?option=com_content&view=article&id=354:morgan-action-to-ensure-childrens-education-a-welfare&catid=52:sustainable-communities&Itemid=21), <http://www.guardian.co.uk/education/2009/jun/05/home-schooling-education-crack-down>, <http://news.bbc.co.uk/1/hi/education/7838783.stm>

of the underlying pedagogic approach seems to be common to many. Some online schools claim that they are particularly appealing for students whose parents desire a higher degree of control over diet and environment during the day, or who currently have difficulty relating to other students. Online schooling also appeals to some expatriates who presumably feel that their local schooling options are not appropriate: they are also a cheaper option. Within the UK there are three wholly-online schools, with around 200 pupils between them. First College<sup>26</sup> and Briteschool<sup>27</sup> are smaller organisations, while Interhigh<sup>28</sup> is supported by Tutors International<sup>29</sup>, a private firm supplying tutors to families around the world. All offer online tuition for GCSE and A-level students, with Briteschool additionally offering primary tuition.

As noted above, much online HE material likely to be administered by the relevant institution (so, for example, MIT's Open Courseware programme is part of the offline institution of MIT rather than being an online university). However, there are a growing number of universities that exist entirely online. The UN's Global Alliance for Information and Communication Technology and Development (GAID<sup>30</sup>) recently announced the formation of an online university, the University of the People<sup>31</sup>, offering tuition-free, currently unaccredited courses in business administration and computer science: its focus is on providing access to university-level education in developing countries. Other entirely virtual universities, such as the US Army's "eARMYU" and Jones International University, exist, addressing different sectors. Currently, a more usual approach currently within HE is to offer a blend of online and offline access to learning materials.

### **Assessment**

Three purposes of accreditation were identified by contributors to the research, all social and/or political in origin but acting at different levels of stakeholder interest: legitimisation (demonstrating that the national project of schooling young people 'works'); differentiation (organising people into the kind of life paths and educational streams that are felt to be appropriate for them), and providing a personal record of achievement, to support life choices and goals. Arguably, the focus of political debate about education has moved from the second purpose to the first. No mention was made within the research of the role of assessment in the learning process, reflecting the emphasis on external structures of education rather than pedagogy. This resonates well with the findings of the DCSF Expert Group on Assessment who suggest<sup>32</sup> that the government has four purposes in undertaking the assessment of young people: to optimise the effectiveness of pupils' learning and teachers' teaching; to hold individual schools accountable for their performance; to provide parents with information about their child's progress; and to provide reliable information about national standards over time.

National high-stakes examinations are the form of assessment most often discussed in public fora: despite a popular conception that these are devised and administered entirely by the state, they are part of what Ofqual describe<sup>33</sup> as "a market for qualifications", provided by "qualification buyers" and "qualification sellers". These examinations – most notably GCSEs and A-levels – are managed and assessed by independent examination boards, primarily AQA, OCR (part of Cambridge Assessment), Edexcel, and the City and Guilds Group. The City and Guilds Group and AQA are independent charities, while Cambridge Assessment is a non-profit. Edexcel, as noted

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<sup>26</sup> <http://www.firstcollege.co.uk/>

<sup>27</sup> <http://www.briteschool.co.uk/>

<sup>28</sup> <http://www.interhigh.co.uk>

<sup>29</sup> <http://www.tutors-international.com>

<sup>30</sup> <http://www.un-qaid.org/>

<sup>31</sup> <http://www.uopeople.org/>

<sup>32</sup> Report of the Expert Group on Assessment, DCSF 2009, ref: DCSF-00532-2009 (<http://publications.dcsf.gov.uk/DownloadHandler.aspx?ProductId=DCSF-00532-2009&VariantID=Report+of+the+Expert+Group+on+Assessment+PDF&>)

<sup>33</sup> "Annual qualifications market report", Ofqual 2009 ( <http://www.ofqual.gov.uk/files/09-4141-annual-qualifications-market-report-april-2009.pdf>)

above, is a private company owned by the publishing company Pearson, and has an income significantly in excess of the other major exam boards (over £200m in 2007 compared to AQA's 2007 income of nearly £150m)<sup>34</sup>.

There are other qualifications providers not recognised by Ofqual, providing qualifications recognised within particular domains and sector. Accreditation from Ofqual recognises the qualifications offered by a particular awarding body as being within the the National Qualifications Framework, giving them greater national currency and providing a level of quality assurance. The number of recognised qualifications has grown from 2771 in 2001 to 8379 in 2008, a 26% increase, and the number of accredited awarding bodies has grown similarly to 140. The majority of providers and increases exist in the vocational sphere, with some specialist organisations (for example, the Associated Board of the Royal Schools of Music) and others that offer a wide range of qualifications (for example, the City and Guilds Group). Employers recognised as awarding bodies – for example, FlyBe and McDonalds – make up 2% of UK awarding bodies, though this proportion is expected to grow over the coming years as employers recognise the value of their qualifications having wider currency.

E-assessment, or the use of ICT to administer, evaluate and present the results of examinations, is a well-established part of the landscape, though not yet mainstream. There are a wide number of different approaches that fall under the term "e-assessment", and some have met with more success than others. There are a complex set of cultural and logistical issues that vary across educational settings: security, reliability, trust and accuracy are all paramount. Against these constraints, e-assessment has the potential to save costs for institutions and to better support standardisation, making it easier to link assessment to other ICT-supported areas of education such as e-portfolios, detect plagiarism and provide students with timely feedback. While at present e-assessment schemes often require champions and technical intermediaries, a recent JISC report<sup>35</sup> suggest that usability is improving, enabling teachers and non-technical staff to prepare their own assessment procedures.

Automation of existing tasks is perhaps the most readily-observed element of e-assessment, using technology to deliver tests online, and increasingly to mark students' responses: multiple choice or short text answers are more amenable to processing by computer than longer texts, though these are still often sorted using computer software prior to being marked by a human, and text analysis techniques are improving, enabling programmes to offer evaluation on the quality of language and judge the content. This raises the possibility of e-assessment making more of a contribution to formative assessment practices in future, with the field developing from being a set of techniques for easing the administrative burdens of delivering tests to becoming a more central part of the learning process. Educational publishers, notably Pearson, are investing in e-assessment, which may make it possible for such firms to offer linked curriculum, assessment and qualification practices to educational institutions and individual learners. Some contributors noted, however, that developments in e-assessment techniques and the possibility of the easy movement of educational data more generally suggest that a modular approach to assessment is possible, with accreditation being offered as a standalone service, perhaps as a way of validating time spent engaging with course materials available on the MIT OpenCourseWare model.

### **Funding education**

The primary source of funding for education is currently central government. State schools receive funds for running expenses from local authorities, who receive a Dedicated Schools Grant from central government intended to cover each schools' three-year budget and the costs of other educational provision (such as providing for special

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<sup>34</sup> Ofqual 2009

<sup>35</sup> "Review of Advanced E-Assessment Techniques", JISC 2009  
(<http://www.jisc.ac.uk/media/documents/projects/raeatfinalreportpdf.pdf>)

educational needs). Local authorities also have responsibility for FE, ensuring young people and adults have access to work-based learning through the provision of diplomas and apprenticeships, and for commissioning education providers to offer work-based learning. Higher education is paid for directly from the Higher Education Funding Council of England (HEFCE), a non-departmental public body. The primary source of funding for education in England, then, is the taxpayer.

Within pre-14 education there are few current alternatives to this model. One way of structuring the disbursement of taxpayer –derived funds differently would be through a voucher system, in which vouchers representing the state’s investment in learners can be exchanged for educational provision of the learner’s or family’s choice. There are concerns over the ways in which implementing this approach may affect local inequalities, with different impacts imagined depending on whether private schools as well as publicly-funded schools may be chosen, the degree to which quality of educational provision varies within a region, or whether or not parents are allowed to top-up their voucher allowances from their own funds. In practice, within England pilot voucher schemes have not been as successful as their supporters might have liked<sup>36</sup>, and although vouchers are a mechanism that supports parental choice and as such might be expected to remain a feature of educational debate, there are currently no plans to introduce voucher schemes on a national scale for children’s education.

The resources represented by vouchers still originate from the taxpayer. At present there appear to be few other sources of revenue for schools or institutions. Parents can fund their children’s education directly through private or independent schools, or supplement state provision of education through paying for private tuition as noted above. Farook notes that more than a quarter of children aged between 11 and 18 years old have had private tuition at some point in their lives, and although there is no consensus on the degree to which such tuition impacts academic achievement, and concern that it may increase disparities in educational attainment, private tuition is still a popular choice for many parents, particularly at levels where new examinations have been introduced, such as SATS in key stage 3. Tuition is frequently focussed on passing high-stakes examinations but might also focus on extra-curricular activities regarded as desirable by parents (such as music or sport). In recent years two major developments within the private tuition market have taken place. First, the emergence of low-cost providers has lowered the financial barriers to entry, with many also based outside traditional learning environments and located within shopping malls or supermarkets<sup>37</sup>, perhaps giving them access to new markets. Second, families who might have sent their children to an independent school are increasingly choosing to invest in private tuition for their children as a cheaper option, increasing the number of children in state school (and in some areas putting more pressure on limited school places). For some learners, private tuition can be a mark of inadequacy or a source of social embarrassment, and Farook suggests that peer-to-peer learning approaches facilitated by ICTs may provide a cheaper and more acceptable alternative to paid tuition.

Following the lead of policy in embracing the language of the private sector, some schools are adopting an entrepreneurial approach to supplementing the funding they receive from central government. Some are able to generate revenue from the use of their facilities, charging for the use of athletic resources for example. In others, pupils contribute to fundraising efforts. At its most direct, this entrepreneurial attitude manifests itself in the opening of for-profit branches of schools overseas, as Harrow and Dulwich College have, and Bristol Academy plans to. Many higher education institutions have taken advantage of their brand to expand overseas in a similar way, though their motivations are often more to do with supporting the domestic institution through

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<sup>36</sup> For example, Wandsworth Council halted their scheme in 1996 (<http://www.independent.co.uk/news/councils-pressure-ministers-to-drop-nursery-voucher-scheme-1357165.html>)

<sup>37</sup> For example, Explore Learning have a branch in Sainsbury’s supermarket in Hampton

encouraging take-up from overseas students than with profit, and it is unclear whether the factors supporting an entrepreneurial attitude within HE, such as an emphasis on innovation for economic benefit, will act in the same way for schools.

HE has explored many ways to supplement central funding. As universities and other HE institutions continue to be pressured by the global market in higher education, in particular from well-funded US institutions, one possibility is for HE institutions to become private institutions, though this would be controversial and some academic disciplines may suffer if universities are able to offer courses that are in their own interest rather than in the national interest. While a full marketisation of the HE sector is unlikely, the perception that higher education primarily benefits the individual may support the removal of the current cap on tuition fees, and more widely mark a shift in student expectations, seeing themselves more as consumers of a service and demanding appropriate levels of care and provision with a greater emphasis on value for money.

Becoming private institutions themselves may be unlikely. However, universities have had close relationships with external private sector organisations throughout their history: most obviously, through philanthropic donations, funding scholarships and departments. More specific interactions are observed between commercial organisations and research groups working in areas with industrial application, with funds for specific research being made available by private sector groups. In recent years direct partnerships between departments and related organisations have begun to emerge, in which the commercial partners might shape the direction of the department and provide links and opportunities to students within their sector. In general, policy supports the notion of private enterprise taking a larger role in funding and supporting university expansion: it is not yet clear what effect this might have on the focus and nature of research and teaching within HE institutions, nor whether work with no immediate application within an industry will suffer as a result.

Links between industry and education are a more obvious feature of work-based learning initiatives. Local authorities have responsibility for ensuring young people and adults have access to work-based learning, through the provision of diplomas and apprenticeships, and for commissioning education providers to offer work-based learning: work-based learning can refer to learning activities that take place within a work environment, or (when used in a UK policy context) to vocational training for young people. Increasingly, post-Leitch, FE providers are being asked to focus on meeting the perceived skills needs of employers, and this creates a role for employers in shaping and supporting the design of FE courses. Employers frequently fund training for their own workforce themselves, though there is a tension between an organisation's short-term needs and employees' longer-term training and learning needs, as employers often prefer to fund short courses addressing specific, often role-related, skills, while employees require transferable qualifications that may not ultimately benefit their employer.

## **Section 2: What features of the contemporary landscape will persist?**

There are a number of features of the contemporary landscape that we can assume will remain relevant to a discussion of the relationship between private and public spheres as far as it affects education in twenty years' time: these might promote or work against the development of some or all of those features described above.

Taking a broad perspective to begin with, we might say that the following list of factors will continue to operate, providing a context for future education. There are of course still many uncertainties associated with each of these.

- Diversity of provision.
  - There will continue to be a range of approaches towards the delivery and provision of education. In part this will reflect the diversity of requirements on the part of learners through population change and a greater emphasis on lifelong learning. Other factors influencing this diversity of provision include changing attitudes towards workplace and informal learning, the effects of a marketised education sector, and a greater range of possible technological affordances. The customer base for educational products and services is likely to diversify as schooling extends to homes, workplaces, supermarkets and community learning centres.
  - Ofqual expect to see more employers seeking recognition as awarding bodies in order to gain currency for their training beyond the limits of their organisation (Ofqual, 2009)
  
- The global marketplace will continue to shape higher education provision.
  - This is a consequence of many larger global economic currents: some are described here. Economic growth has created a demand for educational provision perceived as high-quality for cultural and historical reasons (for example, the current demand in China and South-East Asia for accreditation from 'European' or 'Anglo-Saxon' HE institutions), as well as offering HE institutions the opportunity to pursue more commercial relationships that would impact their brand in their home countries. Increased mobility has made it easier for academics and researchers to travel between institutions, while existing relationships with multinational commercial and industrial partners may give institutions access to other organisations and partners in different countries. Many UK universities actively market their courses to students from other countries. Pressure to compete as global research institutions has already driven some UK universities to merge.
  
- There will continue to be an arm's length relationship between private sector and direct educational provision.
  - While the number of ways in which the state may devolve educational provision to the private sector have grown in recent years, widespread political and cultural commitment to the idea that the state has responsibility for the education of its citizens is likely to ensure that the private sector is not handed direct responsibility for the maintenance of state-owned schools without the state retaining some kind of an intermediary role between third-party providers and learners, or at least retaining an oversight role that addresses accountability.
  
- State involvement in early years educational provision will remain central to conception of a national educational settlement.
  - Similarly, there is an equally widespread commitment to the notion of a minimum educational entitlement and a common educational experience: the use of schools as a site for socialisation and the inculcation of shared values, together with the economic benefits of allowing parents to work rather than care for children during the day, suggests that the most appropriate age for the provision of a minimal educational entitlement is likely to be during a learner's early years. Some contributors suggested that the specific ages intended for this provision may change, perhaps starting at age 3 and ceasing at 14, or not starting until age 7 and continuing till age 21, depending perhaps on the perception of the role of education or developmental effects of formal schooling.
  - The government will continue to create markets for educational services through its own targeted investment in and regulation of education, but contributors felt that 'the stakes are too high' for this stage to be left entirely

to market forces. State involvement in this stage is likely to be seen as providing an initial investment in 'learning to learn' skills that should enable individuals to take responsibility for their learning throughout life.

- The influence of private sector on curriculum and policy will continue.
  - The private sector is likely to continue to influence policy directly and indirectly, through its commercial activities within the education market and through its contributions to wider debates on the appropriate aims and outcomes of education. Market offerings from private-sector learning providers may influence policy indirectly through competition, with the state under pressure to respond to successful private-sector courses by making similar learning programmes available.
- There will continue to be a requirement for lifelong learning.
  - Demographic changes (most visibly an aging society) and changing workplace requirements are likely to maintain the importance of lifelong learning, both as a route to ensuring minimal skill levels and, for some, as a path to further development, whether professional or personal. There is already a trend towards colleges becoming centres of learning for the wider community, collating services that include vocational, work-based, adult and leisure learning, as well as delivery of 14-19 qualifications<sup>38</sup>. However, some contributors felt that the government's vision of lifelong learning remained fragmented, unconvincing and unstructured. Much investment in 'lifelong learning' has in practice been remedial in relation to core provision, rather than an attempt to build or develop new learning.
- Social practices of institutions and learners will continue to shape learning.
  - Several contributors identified the importance of recognising inertia and the durability of established social relationships in discussing educational change. Policy statements, technological opportunities, social changes from outside the sector and market forces will each or together effect change only when they are able to overcome established expectations around educational practice, or when these expectations are no longer part of practitioners' and learners' understandings of education,

More specifically, there are a number of present-day features of the education landscape that authors and interviewees have identified within the Challenge as likely to persist:

- Assessment will continue to move towards technologically-supported automation.
  - This might be an example of technology being embraced primarily as a labour-saving tool to increase perceived efficiency, rather than being driven by a particular pedagogic commitment to using technology in a certain way (although of course any automation of assessment will carry with it an implicit pedagogy). However, there is currently within the education community an awareness that new technologies allow the possibility of logging data from learners' behaviour that might well support the exploration of different approaches to assessment. The recent high-profile difficulties surrounding national SAT examinations both support and challenge this move towards automation, creating a demand for more reliable and trustworthy assessment while at the same time reducing the appetite for risk-taking.
  - As more of learners' practice takes place with technological devices capable of recording data, more classroom activity will be available for evaluation and technological assessment will be able to play a greater role in formative assessment.

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<sup>38</sup>For example, Ideastore (<http://www.ideastore.co.uk/>)

- Peer production and 'web 2.0' approaches to the collaborative generation of formal educational materials and activities will continue to be marginal in the face of institutional and cultural barriers.
  - Despite the enthusiasm for and fascination with recent innovations in web-based communication and data-sharing techniques (often referred to with terms such as 'crowdsourcing' or 'mash-ups'), there is little evidence to date that anybody beyond a small and accomplished minority is able to create materials in this way, or to show how these attitudes towards the creation of educational resources might be embedded meaningfully within existing approaches towards teaching and learning. This is not to deny their potential or the support that can be found within contemporary theories of learning for the exploration and development of such approaches: rather, it is an acknowledgement that the history of digital technology in schools suggests that potential alone, however genuine or widely-acknowledged, is not sufficient to overcome wider cultural barriers to the introduction of new paradigms, and that it has historically taken decades rather than years for new technologies to find a place within education. Not all teachers or learners will want to be producers.
  - Learners may be unlikely to make these sorts of applications directly themselves: however, third-party developers may be able to take advantage of new approaches towards the repurposing and redistribution of data and information. Similarly, HE institutions are likely to continue to use their role as contributors to open-source projects and as sites of technological innovation to take advantage of and develop the affordances of new collaborative technologies.
  
- Investment in and exploration of location-aware technologies will continue.
  - The inherited discourse of the web as an alternative space (cyberspace) also needed to be set alongside trends in location-aware technologies (GPS, geotagging etc) which support an information-enhanced experience of real-world locations. Soon, all locations will be virtual as well as real, and virtual locations will be increasingly differentiated (including by geographical locale, particularly where governments control what is available on local networks). More mobile devices and better access to networks on the move will continue to enrich locations for learning, including remote communities and field sites. Cyberspace and real space will interpenetrate one another, with the result that without a conscious effort to disconnect, all learning is likely to take place in this new hybrid space.
  
- Teaching will continue to be a distinctive professional activity with its own values and skills.
  - However, educational staff will continue to need the support of content creators and service providers. As third-party providers continue to play a role in day-to-day teaching and learning, there will continue to be a demand for technical and product support to assist in the use of tools and content, both in their practical use and more broadly in understanding how new tools might impact well-established approaches to teaching and learning.
  - A wider range of people may undertake teaching and support of learning as part of their professional role, particularly at the post-foundational stages, whether after or as part of an established career in a different sector.
  
- The nature of knowledge will continue to be contested in the face of debates around authenticity and authority.
  - Although the area of knowledge is more directly addressed by other areas of the BCH programme, there are a number of ways in which developments in digital technology and their associated social practices make this a relevant consideration for this research area. In particular, the need to be confident of

the provenance and authority of digitally-gained knowledge will become pressing: not only will people need to be sure of the source and authenticity of information they encounter, but will also need to ensure that they produce information whose authenticity is sufficiently beyond question, in particular when identifying themselves online. Most visibly, there will remain a tension between policy (and associated providers') views of education and emerging student practices and strategies,

- Understandings of information rights and intellectual property will be reconfigured in the light of technologically-informed expectations.
  - It is already the case that there exists a tension between the established legal and orthodox attitudes towards ownership and re-use of information, and those more aligned with the affordances of digital technology. It is also highly likely that retaining these established societal norms will incur an increasingly heavy regulatory cost, making it more probable that they will be restructured in some way. The widespread sharing and redistribution of content – legal, illegal and unlegislated – will remain a feature of this landscape. However, there is high uncertainty over the form they will take: will the current 'wild west' succumb to legal normalisation? Or will a tiered system of information and content evolve as different creators and distributors choose different approaches?
- Tutorship and supplementary learning will become increasingly important elements of the education landscape.
  - The middle classes will continue to use their household resources to secure access to these additional educational opportunities. However, competition between new providers making use of web technologies and novel learning locations is currently lowering the costs of such learning: additionally, independent schools membership is likely to decline at least in the short term as the global economic environment remains depressed, and tuition coupled with state school attendance may be seen to be an adequate alternative to private education for many middle-class parents.
- Marketing through schools by companies not directly related to education (for example, Morrisons' Let's Grow campaign, Tesco's Computers for Schools project) will remain at the current level.
  - While it is true that there is little public appetite for overt branding of any part of the educational experience, there is an appeal for companies in visibly addressing their social responsibilities: this, coupled with the professed desire for stronger links between schools and local communities and a greater acceptance of corporate involvement in the public sphere, will ensure that schemes for the provision of equipment or infrastructure from non-education organisations remain worth individual companies' investment.
- Workplaces will continue to ensure their own training and learning requirements are met, whether by lobbying for the inclusion of certain skills and competencies in curricula, or by providing them directly.
  - Workplaces already form a large marketplace for training and development activities, with individual organisations sometimes able to embrace innovation in ways that traditional learning institutions are not (for example, using videogame technology in simulating not only technical procedures but also interpersonal workplace relationships). This flexibility, coupled with the growing prominence of the private sector in the public sphere and the emphasis on the need for schools and HE institutions to serve the economy, might see techniques and approaches developed in the private sector being more frequently seen in traditional education and lifelong learning.

- Private firms will continue to be used to effect state education provision.
  - While the current economic climate may dampen the recent enthusiasm for the practices of the private sector, the general principle of contracting individual services to third parties is sufficiently established, and the relationships between some private firms and public service agencies sufficiently entangled (as noted by Sefton-Green), that it seems unlikely this will change significantly over the next two decades, even if an adequately practical and compelling case were made (short, perhaps of incontrovertible evidence of widespread and systemic fraud, which at the present moment might provoke state action and a recapturing of the public space: this is unlikely). One practical outcome of this might be that uptake of open source tools in mainstream education meets strong opposition<sup>39</sup>.
  - Alternatively, more educational suppliers may move into the provision of qualifications and accreditation, making their content more accessible but charging more for participation in their assessment programmes.
  - Managerial approaches to education are likely to continue to be seen within the culture of educational institutions, further legitimising the engagement of the private sector.
  
- There will continue to be widespread online provision of learning opportunities.
  - While there are currently many technical and cultural barriers within mainstream schools that prevent full access to web materials, there are a growing number of instances of online provision that support formal and informal learning, originating from both geographically-located and virtual institutions. Experiences of MIT OpenCourseware, VideoJug, Second Life, 5mins and Instructables are evolving the norms and expectations that will be more widely adopted over the coming years.
  
- Public awareness and conceptions of the science of learning will continue to have an impact on views about education.
  - These understandings, whether shared by professional or academic practitioners, will have an effect on what is politically possible in and through education. Reductive accounts of learning in terms of genetic capability or brain chemistry might have more purchase on public consciousness than social and cultural accounts, particularly in light of discussion on cognitive enhancements or genetic technologies. As parents and students invest more directly in education, scientific and pseudo-scientific discourses about learning may be employed more overtly in support of particular private services or public approaches.

### **Section 3: What changes of direction in state/market/third sector provision of education do we see emerging?**

Here we list movements that are sufficiently high-level to be considered as trends in one direction or another. All of these operate under larger changes in the relationship between the public and private sectors: some are specific to education, but many are education-specific instances of wider trends, for example towards greater responsibility for one's own good and wellbeing. And all are written with an understanding that the notion of a simple binary between "public" and "private" is illusory, as illustrated by the recent series of government interventions within the heart of the free market.

- Increasing responsibility for provision of individual education moves from the state towards the individual and their family groups.
  - This could lead to significant levels of exclusion amongst those lacking the capital to ensure appropriate, or any, provision. However, it might also make

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<sup>39</sup> <http://www.itpro.co.uk/603639/becta-open-source-and-education-too-little-too-late>

- it possible for some groups to meet the requirements and needs of some learners in a tailored fashion, perhaps through locally-focussed small schools, which might be the product of genuine community effort, or a carefully-branded offering from educational multinationals.
- This move suggests a recasting of, or at least a greater emphasis on, the relationship between learner and institution as one of customer and provider.
  - Increasing emphasis on health, wellbeing, social skills, citizenship and civil participation as things to be fostered within formal education
    - A wider and more speculative movement might be towards the re-imagining of learning as an essential part of general health and wellbeing.
  - Increasing direct investment by middle-class families in extranormal provision of education
    - This might also lead to increasing interest in and respect given to 'learning science' discourses centred around psuedo-neurological accounts of learning.
  - Increasing diversity of education market
    - Greater choice and competition, or a greater number of groups identifying themselves as possible markets with specific learning requirements, could lead to a plethora of ways of addressing all parts of education, from assessment and accreditation to post-education learning and childcare.
    - Educational publishers that currently receive more benefit from 'off-the-shelf' approaches to education may become more able to provide granularised, modular products that are more easily integrated with custom learning environments.
  - New learning practices facilitated by changes in digital technology
    - Necessarily supporting informal learning to begin with as these appear outside a formal learning context (possible uncertainty: gap between innovation inside and outside schools decreases?)
    - In a formal context, developers of education management software are working to make it easier use and gather information on learners to build a more comprehensive picture of their behaviours, preferences, abilities and achievements, with the intention of supporting learning rather than merely facilitating pupil management. Using this data effectively would require new forms of pedagogy, which in addition to having to recognise the ethical and legal issues involved in using data in this way are likely to be based on a quantitative, process-driven approach to learning, given the present-day philosophies apparently underpinning work in this area.
    - Another possible direction might be for educational technology suppliers to concentrate on equipping learning institutions to enable learners to use their own personal devices, so focussing on providing robust network access, appropriate data sharing and protection systems, device-agnostic authentication systems and other necessary infrastructure features.
  - Disaggregation of education into content, teaching and accreditation in some areas
    - This might happen as a likely consequence of the ready availability of content and open learning materials. In addition to high profile projects in the US<sup>40</sup> several EU universities are now offering their course content for open access, but with potential students applying and paying for accreditation<sup>41</sup>. The

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<sup>40</sup> For example, MIT (<http://ocw.mit.edu>) and Stanford, Utah State (<http://ocw.usu.edu/>)

<sup>41</sup> See for example the Moril project at

[http://oer.issuelab.org/sd\\_clicks/download2/towards\\_european\\_wide\\_quality\\_and\\_benchmarking\\_of\\_open\\_educational\\_resources](http://oer.issuelab.org/sd_clicks/download2/towards_european_wide_quality_and_benchmarking_of_open_educational_resources)

funding models are still emergent and the outcomes by no means certain<sup>42</sup>. One envisaged future has poor, low-status universities bowing out of content and curriculum altogether, offering instead a tutoring service to help people gain accreditation (in-house or external), or brokerage of opportunities on an information, advice and guidance model. Franchising by high status universities and colleges might then become the norm, with a corresponding loss of diversity in the HE and FE sectors. This might impact lower down the age range not only because a re-stratification of post-school institutions would create new pressures at the point of transition, but indirectly through the concentration of power in the hands of accrediting bodies across the sectors. As the technologies of content became virtually ubiquitous, technologies for accreditation, certification, management of learning records, and assessment, will become critical to the sector and potentially highly profitable.

- This separation between content and accreditation may act as a motivator for commercial companies to open access to the materials they currently charge for. For example, Pearson might see more people engaging with learning material for Edexcel qualifications if the costs were reduced, building the market for their qualification, which they could then charge more for.
- Internationalisation of more than higher education
  - If this plays itself out among secondary and primary schools, this would be following a recognised path of innovation within education, particularly with respect to digital technology but also in other domains, whereby practices seen first within HE are found later within secondary and then primary schools. Alternatively, and perhaps reflected more visibly in the present, further education and lifelong learning opportunities, alongside supplementary tuition online or in drop-in centres, may be offered by multinational organisations.
- Increasing movement of some education institutions to brand themselves on a global scale
  - There is a movement for some schools, largely independent, to open 'branches' abroad: Harrow has schools in China and Thailand, while Dulwich College has schools in China, the income from which is intended to support means-tested pupils attendance at the London school.
  - There are likely to be more UK students studying abroad, and more students from traditional overseas markets studying in locations other than the UK, as China, for example, continues to turn itself into a "host" country offering globally competitive education opportunities.
  - This and the previous trend have implications for curriculum design, in particular the need to be aware of culturally-specific aspects of existing curricula that may not be as appropriate for a more global audience.
- Third sector involvement in providing specialist services to schools rather than managing whole institutions themselves.
  - This would sidestep questions of accountability and mechanisms of redress in the event of service failure. However, there would be equally pressing questions raised about the possible use of third sector organisations as a substitute for government-funded provision.
  - Increased diversity of locations associated with learning
    - The association of purpose-built buildings with education may be weakened through the locating of for-profit education services within shopping malls and supermarkets, the use of community facilities by educational institutions (for example through partnerships with leisure centres) and the emphasis on libraries and museums as places affording learners opportunities for active

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<sup>42</sup> <http://www.downes.ca/cgi-bin/page.cgi?post=33401>

educational engagement rather than being only passive repositories of artefacts.

- Tensions between knowledge cultures, primarily along generational lines
  - New information technologies are likely to reconfigure attitudes towards knowledge use and creation, and those groups that are less familiar with their use may find that existing ideas about ownership, authenticity and identity are challenged by the new practices that emerge alongside these new technologies.

## **Section 4: Major uncertainties**

The trends described above have clear directions of travel, but the ways in which they play out in the world and their implications are uncertain. In this section we briefly outline some of the major areas of uncertainty with respect to the ways in which education might be structured and organised in the coming years.

Despite the impetus towards a marketised school system described above, it is far from certain outcome. There are political obstacles: many in society are unwilling to imagine a fully-marketised school system, and the need to keep the private sector at arm's length noted above is likely to continue to obtain. There are risks that the push towards marketisation originating in discourses of 'choice' and 'personalisation' may tend more towards segregation and division if given full rein. More practically, there are many changes that would be necessary for the school system to be fully-marketised. Some possible structural changes could include the linking of LA funding to performance, capitation following pupils in addition to funding, the removal of LA control over the funding and organisation of schools, schools given the ability to opt-out of the delivery of a national curriculum and of national staff payment agreements, a robust system for managing school failure, and a national school bus or other transportation system which would enable choice to be meaningful and not constrained geographically as at present.

A related uncertainty is the role played by more affordable private tuition. As noted above, the increase in affordable supplementary provision of education may lead to an increased number of middle-class children in state schools, as their parents conclude that combining state schooling with extra tuition is comparable to a wholly-private education. However, as the affordability of private and supplementary tuition becomes more visible, traditional resistances to private education – a perception that it is too expensive, or only relevant to a higher social elite – may be reduced, encouraging greater uptake. This might be more likely to benefit new entrants into the private sector rather than the traditional 'public schools': additionally, the immediate impacts of the economic depression will tend to work against increased uptake of private education in the short term.

There are a number of areas of uncertainty concerning the sites within education where innovation and innovative practices might emerge. Specifically, the marketisation of content designed to support teaching and learning, the development of open-source software in schools and the role of national public service broadcasting are ones with plausible but contrasting possible alternative paths. All of these have at their centre the effect of communications technology on existing knowledge practices.

Currently, material intended to support teaching and learning, or 'content', is often assumed to be valuable through its designation as 'intellectual property': dissemination relies on its remaining unchanged, and on its being useful to educators. Existing stresses on our notions of IP may lead to an exploration of the value of protecting the design and instruction processes associated with such content, rather than simply the static material. This approach would be counter in spirit to the 'open source' attitudes described above: we have already noted, however, that within mainstream schools there

are strong forces countering the widespread adoption of open source software and the notion of freely distributing intellectual property. A recent OECD report<sup>43</sup> warned that commercial interests might start patenting content based on the expertise that has gone into its instructional *design*. This was particularly a concern with respect to educational materials for the US schools market, where content is almost entirely outsourced.

Regarding open source software in education, contributors to the research accepted that operating systems other than those from Microsoft will remain rare in mainstream schools, due in part to teachers' unfamiliarity with the software. However, it is also accepted that many schools (particularly primary schools) contract third-party suppliers to maintain and manage their technology infrastructure. If it became worthwhile for these firms to supply open source software, perhaps through a need to price competitively, or demands from schools for more customised software, then provided they also offered adequate support for its use it might not be unrealistic to imagine a wider range of operating systems in use across the sector. For smaller or more marginal schools, perhaps those at a greater remove from the culture of mainstream schooling, open source might be a more appropriate option for financial or perhaps cultural reasons. One major uncertainty that emerged from the interviews carried out was the effect that the entry into the workplace of students familiar with open source projects will have on the software market, given the argument put forward by some contributors that software companies are keen to establish their product as central to students' practice in order to maximise the likelihood of those students preferring it in their professional practice.

Of course, information available online may not be open source. Amongst contributors to the event and interviews there appeared to be an assumption that the availability of online information would change profoundly what would be required of the education system, with a related assumption that the teaching of information would give way to coaching in information skills of various kinds and for various settings. Networked information, along with the associated networks and services, would continue to be free, openly available and highly accessible. The question of who would own the networks and data warehouses, and who by extension would control the information being shared and accessed by users, was not raised. However, Jonathan Zittrain's recent book<sup>44</sup> notes that the Internet is at something of a crossroads, with a proliferation of 'sterile' devices that give basic access without allowing users to share and generate content. In one possible future, then, the Internet becomes a commercial mass medium, with a large majority of passive consumers having their attention sold to advertisers as the price of access – or having to pay more directly. For the Internet to remain a place of creative interchange, a critical mass of users must continue to use computer-like devices to generate and enrich content. How IP is managed on the internet will also of course have a profound impact on the future of online information. It was noted that everything on the web is owned and commercially mediated, and that norms of usage are becoming framed in legal and commercial terms rather than the open, creative terms on which the web originally evolved. Ultimately, authority might be derived from the strength of the brand providing access to information, raising the possibility of organisations whose core business has traditionally not been education providing courses and access on the strength of their existing relationship with consumers.

Public service broadcasters (PSBs) are acknowledged to have responsibilities towards supporting education, broadly defined, and as their role within the national media landscape changes, so too will the ways in which they support education. The ways in which they do this currently, and the ways in which they might do so in future, are complex when examined in detail, but taking a more general view there are two main

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<sup>43</sup> *Innovation in the Knowledge Economy*, 2004:

[http://www.oecd.org/LongAbstract/0,3425,en\\_2649\\_39263294\\_31658285\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/LongAbstract/0,3425,en_2649_39263294_31658285_1_1_1_1,00.html)

<sup>44</sup> Zittrain, 2008, "The Future of the Internet and how to stop it", Yale University Press (available at <http://futureoftheinternet.org/>)

visible tendencies, each a reflection of the wider discussions about the future roles of PSBs. One is an explicit commitment to formal institutional education, with a focus on providing 'learning content' through profit-making, following a path established by movements such as the BBC Active partnership between Pearson Education and BBC Worldwide<sup>45</sup>. The other follows from a recognition that PSBs are in a unique position to foster innovation and support new ways of engaging with media technology, and that their engagement with education should reflect that, continuing along the direction that elements of Channel 4<sup>46</sup> and the BBC<sup>47</sup> are exploring. It is not currently clear how the two directions would continue to coexist, although it is equally difficult to say that they are necessarily counter to one another.

PSBs are given a national remit, with the historic exception of the BBC World Service, and engagement with overseas territories tends to be through profit-making arms of the organisations. Similarly, HE institutions are increasingly engaging with other territories for reasons of profit, as noted above. There is an uncertainty here around language. Demand for English language education materials is high, and while English is the basis for global conversations likely to remain so. However, while the BBC, the British Council and others promote their English language materials through associating them with Standard British English and its perceived authoritative nature as the 'original' or 'most correct' form of English, as global middle classes grow in confidence other Englishes may become more appropriate, reflecting greater national self-confidence.

From the event and the research it is clear that there is uncertainty about who will support innovation in society and the economy? Employers tend to upskill their workforce in areas relevant to their short-term commercial horizons, but society needs the capacity to respond to change on a wider basis and a longer time frame. Traditionally, providing this capacity has been the role of higher education, both through research and development and through the production of higher order skills. If higher education is to be more closely tied to the requirements of graduate employers, and if research is to be further dissociated from teaching (e.g. through a re-stratification of the sector), universities' capacity to support innovation on a longer time-scale may be compromised. On the other hand, widening access to higher education, as required by the Government's current commitments to higher order skills, may mean a larger percentage of the population acquiring such skills.

The question of whether national boundaries will be made irrelevant by networked technology is frequently heard within debates on the relationship between technology and education, and it is certainly true that new global communications infrastructures, combined with corporate branding and positioning, has enabled some education institutions to become less tightly coupled to one particular geographic location. On the other, trends towards a greater emphasis on geolocate and mobile technologies and services within consumer electronics and web use patterns, and towards regional governance and regulation of internet services, might make the notion of 'cyberspace' or 'the virtual' as being places independent of geography outmoded. Networked life may be much more tightly coupled to physical location than previously imagined, with consequences for educational activities that rely on different models of technologically-mediated communication. Indeed, the increasing diversity of provision, and local variety of needs and requirements, could see educational becoming a regional rather than a national project.

It was suggested that a non-technology-based education might become highly desirable, particularly if technology continued to support massification and diversification of teachers' roles. Alternatives such as Steiner schools are already proving attractive to

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<sup>45</sup> <http://www.bbcactive.com/>

<sup>46</sup> Channel 4's commissioning strategy for education content can be seen here:

[http://www.channel4.com/corporate/4producers/commissioning/4learning\\_2.html](http://www.channel4.com/corporate/4producers/commissioning/4learning_2.html)

<sup>47</sup> For example, [http://backstage.bbc.co.uk/news/archives/2009/01/bettr\\_and\\_teach\\_1.html](http://backstage.bbc.co.uk/news/archives/2009/01/bettr_and_teach_1.html)

middle class parents, and could present a counter-balance to an increasingly technologised schooling system. Related to this idea was the notion of an unmediated intellect becoming a status symbol in a world where performance enhancement through drugs and digital devices/implants/grafts were to become commonplace, or perhaps instead such a mind would be a sign of deviance. Perhaps the 'conscious effort to disconnect' might become a counter-cultural movement among groups of parents and young people.

There are a number of uncertainties within formal education that are worth noting in the context of future educational organisation and provision, around the notion of specialisation, accreditation and teaching as a profession. Currently, the majority of young learners in formal education are encouraged to specialise, choosing between 'science' and 'arts' subjects at school and then later a more specialised discipline or area in higher or further education, represented as a choice made in support of an eventual professional career. Discourses of personalisation and 'learning styles', as well as pressure on schools to meet attainment targets, may encourage young people to focus on one particular area even earlier than this: alternatively, recognition that longer working lives make it more likely that careers will cover many disciplines and an emphasis on genuine lifelong learning might together remove the need for young people to specialise in initial education. These alternatives act to shape the future role of accreditation: is it most relevant as a badge indicating that compulsory schooling has been completed, as a means of differentiating between young people, as a mark of competence in a given area, or as something else entirely?

Related to this is the question of when and where specialisation might occur in the education system. Diversification of schooling around different types of provision, seen as a likely possibility by some contributors, might entrench social stratification. Vocational training could migrate further down the age range, with large companies or corporate sectors more actively involved in creation of curricula and sponsoring specialised schools. Universities may forge new relationships with schools that focus on particular domains of expertise, allowing schools to offer specialised courses of education that serve as introductions to degree-level learning and induct students into particular knowledge communities earlier than at present. At an extreme this could be seen as a return to a form of guild system for at least a section of the school population. Alternatively (or, in a highly diverse system, relatedly), different communities could take responsibility for supporting different kinds of learning centre, embracing different educational values, and fulfilling social as well as educational needs.

Accreditation and certification through formal education is likely to play a continuing role in 'organising' young people into different life paths, but it is unclear how far that process will be driven by the diverse capabilities and goals of learners and how far by external pressures, for example to prioritise access to higher levels of learning or meet the needs of employers. If the move towards competence-based accreditation continues, the trend towards individualisation might well be enhanced, as responsibility is placed on the individual to demonstrate a standard or competence, rather than on the provider to 'cover' the relevant knowledge and skills. Different forms of accreditation might be developed to recognise informal know-how and practice-based competences: speculatively these might be technology-supported, e.g. based on video recordings, perhaps with analysis and tagging. This would ensure the further diversification of qualifications and standards of achievement, and might also render much more permeable the boundaries between formal and informal/non-formal learning.

These, and other, possibilities will naturally drive changes in the teaching profession. The trend towards the disaggregation of educational activity into separate domains of 'content', 'delivery', and 'assessment' calls into question the need for a single role of 'teacher', though may open up new opportunities for specialists in these three areas. Increasing financial and commercial pressures may lead to greater variation in contract

terms within the profession, with more members of the workforce working as temporary or short-term members of educational organisations. Alternatively, these same pressures may lead institutions to consider the members of their teaching workforce as marketable assets, promoting their expertise and experience as qualities that reflect positively on the institution. Finally, if roles within the teaching workforce are to change significantly, it may be that responsibility for training the workforce may need to reflect this, through 'in-house training', different levels of professional accreditation, greater emphasis on professional development and possible increased engagement with sectors outside education.

One argument that arose from the event was that the trend of 'outsourcing authority and control' to private companies (i.e. transferring public education funds to commercial providers of content and accreditation, rather than paying teachers to provide them in-house) would undermine the profession, and therefore the quality of education. This argument was also expressed in slightly different terms elsewhere in the discussion: the disaggregation of educational provision into content, teaching and accreditation would undermine the integrity (literally) of the teaching profession. Counter to this came the argument that budgetary devolution to schools opens up a market for 'niche' learning approaches and areas of specialism. Schools could purchase services to fit their own curriculum model on a piecemeal basis (and there would be new opportunities here for commercial providers, such as Montessori learning materials), but the curriculum would be strongly associated with the school and there would be an investment in teachers as the source of ideas and practices relevant to the school's particular mission.

An important intersection of the private sector and education occurs in the context of pharmaceutical interventions: drugs intended to address conditions such as ADHD are manufactured and distributed by private companies, and are a feature of many classrooms. The debates around the place of pharmaceutical interventions within education institutions are complex and ongoing, and likely to inform the response of educators and parents to the likely increased availability of drugs intended to enhance cognition and other pharmaceutical and biological enhancements. If such enhancements became the norm in particular workplaces (for example, within engineering, banking or medicine), and if cognitive processes could genuinely be enhanced without cost to the individual, then come contributors felt that their use in higher education would also become the norm. In schools, a competitive assessment regime would make use of enhancements inevitable, whether or not they were regarded as legitimate. Access to such enhancements would probably come to be regarded in the same way as access to books or a balanced diet – possibly unfair, but not 'cheating', and accessed more easily by well-resourced middle-class families. Alternatives were proposed, however. After a period of differential access, pressure might grow for an equal entitlement as is beginning to happen with networked computers: schools might even be under pressure to provide medication along the lines of school milk. Drugs might be used as a form of social control, with medicated or enhanced classes being better behaved and more amenable to learning messages: low capacity to learn could become a medicalised issue, like ADHD. It was felt by some that, as part of these practices, diagnostic testing would be an area of likely development, given the existing interest in diagnosing children with particular learning needs. Genetic forms of diagnostic test might become more prevalent in education, by transfer from other sectors such as insurance and medicine. Perhaps such an emphasis on the biological would see education considered more properly an aspect of health and wellbeing in the future, with pharmacological and health providers moving into the provision of education as a natural part of their core business.

## **Section 5: Implications for educational policy makers today**

These trends and movements within and between the private, third and state sectors all have implications for education and educational policy to some degree. In some cases, the patterns described are a consequence of policy or otherwise already acknowledged

by it (for example, the increasing presence of a market culture within education). In others, education policy has not yet begun to visibly engage with the implications of some of the trends presented here (for example, the tension between encouraging localisation and decentralisation, and treating education as a national project). Here we briefly outline some of the implications for education policy arising from the foregoing overview of the relationships between the state, the private and the third sectors.

There are large areas of uncertainty associated with these interactions. Will education publishers continue their project of vertical integration? Will grass-roots collaborative technologies subvert commercial interests? To what extent will it be acceptable for the state to fund institutions that represent minority values? As the sector diversifies, questions of this nature will multiply. However, keeping track of sites of challenge and innovation will become increasingly problematic without a deliberate effort to remain informed and receptive. Collaborative technologies make it easier to develop new practices under the radar. New forms of education may emerge in England that developed overseas where their growth may not have been followed. Received ideas about what is and is not 'education' may cause individuals to miss the evolution of new forms of learning practice. In developing the capacity to manage uncertainty, it will be helpful to establish practices that enable the sector to monitor activities centred around learning beyond formal state education, including informal learning practices and learning within the workforce.

Three areas that will be of particular relevance to policymakers arising from the reviews and interviews are the nature of schools, the disaggregation of content and accreditation, and the influence of commercial activity on shaping educational provision.

Much of the foregoing discussion draws attention to the possibility of schools no longer being a core organising structure for education, perhaps as a result of the decentralised nature of new learning networks and practices, or the greater role played by employers and corporate groups in ensuring skills provision. Where they continue to exist as a corporate entity, they may well not be exclusively located within a physical building: school infrastructure may be shared with other local groups or partners, or schools might hire appropriate working space from commercial firms as other corporate groups do. Meanwhile the school would still be able to function effectively and ensure its brand remained robust through partnerships with other institutions or through a strong online provision. This is counter to our current conception of schools as a fundamental element of schooling and an appropriate unit around which to structure state interaction with learners. It may be worth examining the assumption that bricks and mortar schools will continue to be at the heart of education, and exploring alternative mechanisms for distributing state support for learning or effecting national policy interventions.

A second theme throughout the research has been the separation of content from teaching or accreditation. In particular, there is a strong trend towards making educational resources freely available online, whether funded by institutions as in the case of the OpenCourseWare consortium or by individuals as in the case of many contributors to (for example) <http://5min.com>. There is a wealth of educational content available: however, much of it is not necessarily encountered with a teacher, nor is it necessarily able to lead to a qualification. This raises a number of questions, many of which would fall within policy-makers' sphere of interest. How do learners gain recognition and acknowledgement for their effort in engaging with this content? What is the role of the teacher if they are no longer as able to mediate the content with which learners engage? If there is a rise in paid-for accreditation services, how is accountability ensured and regulation established? These questions will need to have been considered if the effects of this disaggregation are to be managed well.

The third relevant theme arising from the research is effects of horizontal and vertical integration of the education market on the educational landscape. The possibility of a

single commercial publisher being in a position to supply a physical learning environment, design the curriculum followed in that environment and award qualifications to learners based on that curriculum is now a reality following Pearson's investments in schools in China and in Edexcel. This vertical integration raises questions again about the role of the private sector in the provision of a public good, and the ways in which a single provider might eventually be in a position, through providing all aspects of an educational experience, to distort the market in their interest, rather than in the interests of learners or wider society. Horizontal integration within the education market raises different but related questions of accountability and transparency, as areas previously assumed to be unrelated become part of a corporate provider's portfolio of interests. The private sector has little motivation for making these connections and interests transparent: it would benefit the sector as a whole for policy to be active in monitoring the interconnections between interests within the education market.

The outcomes of this research effort also suggest three considerations for the exploration of educational futures. First, contributors noted that any discussion of technology in education and the role it may play in future developments ought to look both at its impacts at the 'micro' level of individual learners' interactions with technology, and at the 'macro' level of the institutions developing or responding to new technologies. Focussing on one or the other would lead to a distorted and unrealistic view of the effects that might be expected from new educational technologies. Second, many interviewees noted that useful educational futures would foreground the likely decrease in public funding and its effect on resources available to education, as this would challenge many of the structures and mechanisms that currently effect educational provision. Finally, and most importantly, discussions on the future of education ought to make every effort to incorporate and acknowledge the values and goals that underpin education, as these ultimately will inform whether or not education is judged to be successful in the future.

## **Appendix 1: Activities undertaken within the Challenge**

The Challenge is intended to help the Beyond Current Horizons programme understand the following overarching question:

- How might education delivery be structured and organised in 2025 in the light of changes in
  - public/private relationships and
  - development of digital and bio technologies?

Specifically, the work commissioned in this challenge aimed to illustrate:

- Key trends in the relationships between state, private and third sector provision of public services
- Key uncertainties and potential discontinuities within this domain
- How these trends potentially intersect with developments in science and technology
- The range of potential futures these trends might point to from the present to 2025-2050

Work was initially intended to be commissioned under this Challenge from July 2008 under the leadership of an external academic, on the same model as the other four Challenges within the BCH programme. However, the original Challenge lead resigned from the role in September 2008 due to pressing professional commitments. Subsequently, Futurelab have undertaken the commissioning of papers, under a revised plan that reflected the compressed timescale and enabled this Challenge to meet its milestones at the same point in the programme as the other four Challenges. The revised plan was been approved by the BCH Programme Board and the DCSF.

- This revised plan comprised the following activities:
- Commissioning 4 substantive reviews in key thematic areas:
  - Public/private relationships in education
  - Existing educational provision and digital technologies: political economy, new models of delivery and developing markets
  - The digital landscape and new education providers
  - The relationships between health and education providers
- Conducting a series of interviews with leading thinkers and practitioners in industry, academia and policy sectors
- Running an event to bring together research, industry and policy sectors to identify emergent and future trends in public/private/third sector provision.

### **The industry, academia and policy interviews (Oct – Nov 2008)**

In addition to commissioning the reviews described above, this Challenge drew on interviews carried out with individuals working at the intersection of public and private sector education provision: this reflects the comparative lack of academic evidence on the relationship between these sectors with regard to the delivery of education, and furnishes the programme with a selection of current concerns and forward-oriented insights from those shaping and understanding the interactions between these three sectors.

These interviews informed the commissioned reviews. Where the interviewee's approval has been obtained, the transcripts will also be made available as standalone resources.

### **The event (November 2008)**

On the 19<sup>th</sup> November 2008 an event took place at the Institute of Materials, Minerals and Mining (<http://www.iom3.org/content/location-map>) which brought together a range of attendees from policy, academia and industry to examine the broad questions underpinning this Challenge. How might the education 'market' be changed by the development of new digital education platforms – for example, what 'new' education providers might emerge through the development of online offerings? What relationships between commercial providers and mainstream educational institutions might develop? Is there a future for 'open' education resources? How might local and global education provision and governance change in the context of online educational resources? What relationship between public and private provision might develop?

Themes and key interactions between private, state and third sectors were identified by participants in this event: these were summarised from notes and transcripts by Helen Beetham and are incorporated in the synoptic report above.

Participating in the event were:

- Richard Sandford (facilitator), Futurelab
- David Istance, OECD, CERI
- Andreia Santos, Open University
- Julian Sefton-Green, Freelance/Futurelab
- Jeremy Silver, outgoing CEO Sibelius
- Tim Tarrant, TDA
- Steve Taylor, Stripey Design
- Ed Tranham, Meissa Limited

### **Aims and agenda**

The Challenge 5 Event was organised with the aim of bringing together key thinkers in the Challenge area and eliciting ideas that might not yet be visible in the published literature of the field, as well as providing an opportunity to cross-check issues emerging from commissioned reviews. The overall aim, as with all Challenge Events, was to

support the construction of coherent, robust and relevant scenarios of alternative educational futures.

The agenda followed the two organising themes of the Challenge:

- to describe some of the social and political factors shaping the future delivery of education, particularly shaping the likely balance between public and private sector provision
- to review some of the relevant technological (digital and biological) trends and describe their relationships with the social and political factors shaping the future delivery of education

## **Appendix 2: Work commissioned under the Challenge**

### **Public/private relationships in education (Faizal Farook)**

This review is specifically concerned with understanding the current trends and potential future trajectories of public/private relationships in education, through a review of the existing evidence and current trends centred around the following indicative questions relating to the development of educational provision over the next 10-15 years:

- Who takes responsibility for ensuring access to education – individual/state/community/workplace? Where does this responsibility lie today? How might this change over the coming years? What might lead to these changes?
- What types of education provision may be offered by the state and what by other bodies – private sector/individual/community/voluntary?
- What sort of structural institutional relationships pertain today and which might develop in managing and delivering education in different configurations of state/private/third sector relationships?
- What curriculum implications might ensue from any changes in provision?
- What workforce is implied by any changes?
- What financial arrangements might be developed to enable new forms of education delivery – vouchers/ local schemes/ local providers?
- What risks might emerge for which groups from these models of provision?
- How does accreditation and certification play out?

### **Existing educational provision and digital technologies: political economy, new models of delivery and developing markets (Julian Sefton-Green)**

This review is concerned with understanding the way in which developments in digital technologies – both in terms of the technology industry and the resources that it develops – might change the way in which mainstream education is 'delivered'. It focuses around two inter-related but distinct subthemes: firstly, the relationship between the existing digital technology industry and state education, and secondly, the ways in which digital technology platforms create opportunities for this education 'industry' itself to change its mode and purpose of delivery. As before, this is explored through a review of the existing evidence and current trends that relate to the development of educational provision over the next 10-15 years with respect to the following issues:

- What are the relationships between digital technology industries and education provision at present? How might these develop in future?
- How are the design and implementation of digital technologies for education by commercial companies shaping delivery of education?
- To what extent do the commercial companies developing digital tools promote or facilitate particular models and ideas of education?
- How/does the involvement of digital technology industries in education change the relationship between schools and students – to what extent are students seen as a market or potential future consumers?

- How does free, libre, open source software compare with these approaches? Are there characteristic differences between these and proprietary/commercial suppliers?
- What different models of provision are offered by free, libre and open source development approaches? What are the limits or possibilities offered by these?
- How are existing education providers (schools/universities) likely to 'deliver' education differently through the use of online resources
- Will online resources enable education providers to identify new markets and extend their existing remit?
- What new models of delivery may be enabled by digital technologies? Might these models allow them to meet the needs of those they already serve differently?
- Might new models of provision enable existing providers to develop new funding streams – what are the implications of this for the 'public good' of education?
- What new opportunities do digital technologies offer to voluntary/ informal education sectors?
- Are there going to be different levels of 'access' to education for different people using different tools – i.e. those who have access to one sort of platform get one sort of access etc.

### **The digital landscape and new education providers (Briony Greenhill)**

This review is concerned with understanding the role that may be played in educational provision by organisations and sectors who are currently rarely considered part of mainstream educational provision, or by completely new arrangements of educational provision. It is intended to help the BCH programme understand what new providers might enter the education arena and the sorts of institutional, financial, curricular and assessment relationships that might emerge.

- What new 'providers' of education are enabled by the development of web and other technologies – e.g. school of everything, 5min, you tube, homeschooling networks, commercial providers providing customer training and support
- What happens to the traditional publishing industry – how might organisations like Pearson, the Guardian and others develop?
- What happens with existing broadcasters with public service remit – what sort of educational provision might they develop?
- How might digital technologies enable workplace training and education providers to offer new models of learning?
- Might open source models of education and communities of learning flourish – and in what ways might these lead to new forms of provision?
- What are the implications of new providers for curriculum and assessment – what new offers might these providers make to learners?
- What forms of accreditation and development currently exist and might be developed in a diverse landscape of provision?
- How might learners navigate these different providers?
- What are the implications for ownership of knowledge and resources of developments in online provision from diverse parties – for example, for educational provision in Second Life, what ownership of IP models may develop?

### **The relationships between health and education providers (Nick Lee)**

This is a broadly speculative piece exploring the potential relationships between health and education sectors in the design and delivery of education, considering in particular how the pharmaceutical industry currently relates to medical professionals and exploring whether there are potential indications there of how similar relationships might develop with education professionals. It should also explore the current relationships between the private sector (including digital technology companies) and education, and examine how the pharmaceutical industry might develop similar relationships. In particular, current attempts to site discourses of 'wellbeing' within formal education are to be examined in light of developments within cosmetic pharmacology and neuroscience. How might

pharmaceutical companies come to be involved in state education – in what roles? And what relationships might develop between pharmaceutical companies and individuals/professionals working in the education sector – what new codes of practice might emerge?

*This document has been commissioned as part of the UK Department for Children, Schools and Families' Beyond Current Horizons project, led by Futurelab. The views expressed do not represent the policy of any Government or organisation*