The BSF programme: Teacher involvement in Design (A)

It's a very difficult job to know what the school for the future should look like, but if it isn't even right for the present it probably won't work for the future either (Head teacher, spring 2008)

As Ryan C. got on his bike for his morning commute to the headquarters of the Manchester City Council (MCC) Capital Programme, he mulled over the two options he planned to table that day. Ryan had been appointed a programme manager for the Manchester Building Schools for the Future (BSF) programme in mid 2006. For the last twelve months, he had managed four of the 17 school projects which formed the £200m wave 1 of the programme. Recently, the BSF board had called a meeting to discuss the governance structure for the next wave 4 school projects.

A salient feature of the governance of the Manchester BSF wave 1 was the active participation of the head teachers and heads of faculties (e.g., English, math, science, arts, ICT) in the design and development process of the new schools. This had been so to the extent that each wave 1 project could not progress from design into the construction stage until the school design steering group (in which the head teacher sat) signed off the design drawings and specs. But the process had been difficult for programme managers due to the different interests between the BSF board and some senior teachers. The BSF board, comprised of senior members of the Local Authority (LA), championed a design brief aligned with the government policy for education. But some head teachers and heads of faculty were wary of supporting innovative designs. They deemed the innovations could fail to work in the particular situations they faced in their schools. To complicate the negotiation process, the programme managers operated under a fixed budget and a challenging timescale set by the funding scheme. Any slippage in the programme could add thousands of pounds per month to costs due to high inflation in construction prices. This, in turn, would mean that either the new schools would have to 'shrink' relative to the original plans, or other design features would have to be sacrificed to keep the overall programme within budget.

The Manchester BSF programme was a subset of the vast 15-year, £45bn programme the Government initiated in 2004 to rebuild or renew 3,500 secondary schools in England as part of its educational reform agenda. The BSF programme motto was "beyond bricks and mortar". A successful bid submitted by the LA to the Department for Education and Skills (DfES)[1] secured £450m to rebuild or renew 33 schools. The ethos of the bid was to "develop the capacity to deliver a 21st century learning experience and provide children with a greater opportunity to foster talent and succeed outside education." Manchester had been one of the very first LAs to bid successfully for BSF funding. The bid was approved in 2005 and the anticipated completion date for the programme was 2012. This programme was strategically important for Manchester as

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[1] DfES later changed the name to Department for Children, Schools and Families (DCSF)

some of its secondary schools experienced education attainment levels at the bottom nationally, with over 50% of pupils leaving school without achieving a qualification.

Ryan was aware of a perception at BSF board level that some wave 1 schools were "new old schools" in the sense the designs were less transformative and inspirational than they had aimed for. Of course there were transformative aspects in the school designs, but a fully transformation type of school hadn't been achieved yet. This echoed broader critiques to the BSF programme made recently by the Commission for Architecture and the Built Environment (CABE), the influential government's advisor on architecture, urban design and public space. Cognizant of this, the BSF board tasked Ryan to table alternative governance structures for wave 4 within which the design of the earlier projects was planned to start in January 2008. In Ryan's mind, MCC could limit the participation of senior teachers in the design. This would assume that the LA was the 'landlord' and teachers were 'tenants', and accordingly they should have a limited share of voice in design. This approach was not new. Knowsley, another LA involved in wave 1, had excluded reportedly the teachers from the design decision-making process of their £150m BSF programme to replace 10 schools with seven new 21st century Learning Centres. Of course the LA involved teachers in the design and took them into best practice visits[2] as part of the consultation process on how the new schools should look like. That was a statutory requirement. But after the consultation, the LA decided that each Learning Centre would consist of a set of flexible and adaptable spaces rather than a set of individual classrooms. The design of the Centres also incorporated innovative features such as 'self-sufficient learning pods', 'learning streets', and 'democratised spaces'. Knowsley teachers would have to reapply to positions in the Centres.

Alternatively, the LA could keep the governance structure that it had used in wave 1. Surely, managing the school co-design and co-development process was hard work. Some results were disappointing from a LA's perspective and had diverged too much from the original design brief. But if teacher participation in design encouraged them to develop a sense of ownership and pride in the schools, as the BSF programme guidelines suggested, these negotiations were perhaps part and parcel of delivering the best schools for the future. They also made the process democratic. And admittedly, had teachers not participated in design, some innovative features of the wave 1 schools may had been lost since they built upon teachers' know-how of running inner city schools. For example, school management teams had provided valuable guidance in the design of pastoral care spaces (e.g., anti-bullying toilets, covered courtyards) and of school facilities that would meet the needs of their own communities. Was this process then just a question of 'no pain, no gain?' Ryan was mindful that one wave 1 project had slipped into wave 4 due to disagreements between the BSF board and the head teacher. What if the board asked Ryan's opinion? Which project governance structure did he reckon more appropriate?

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[2] Trips to award winning projects including St Francis Assisi Academy, Kensington; Montessori School, Amsterdam; and Kellerup, Copenhagen. Hellerup, for example, had a wide staircase that doubled as a central assembly hall and a lecture theatre where children used the stairs as seats; and it also lacked fencing around the site

THE BSF PROGRAMME

When the UK Labour government came to power in 1997, it announced education was one of its main policy priorities. In his first Budget Statement on 2 July 1997, Gordon Brown, the Chancellor of the Exchequer, said "Economic success tomorrow will depend on investing in our schools today. But at the present rate of progress, many of our children will be educated for the 21st century in classrooms built in the 19th."[3] After launching a multi-billion capital programme in 2001 for repairs and modernization of existing schools, the Government shifted thinking in October 2002. DfES noted that only 14% of the schools in England operated from buildings constructed after 1976, and that school buildings built between the 1950s and the 1970s had a design life of around 30 to 35 years. This meant that most of the school stock was already into its replacement period, and was becoming increasingly expensive to maintain and operate and unsuitable for modern school use"[4] (**Exhibit 1**). Rather than just repairing and replacing inadequate buildings, said David Miliband then Minister of State for School Standards, the redevelopment of schools would be put forward as a means of improving educational standards. In February 2003, DfES published the consultation document on the BSF programme.

The launch document for BFS, published in February 2004, confirmed the Government's £45bn commitment to refurbish or rebuild every secondary school in England in a series of 15 "waves" from 2004 until 2016. Waves were identified in three year blocks corresponding to the three year government spending round commitments. The government also wanted LAs to increase the number of Academies─all-ability schools established and managed by independent sponsors and funded by the Government at a level comparable to other schools. Sponsors included educational foundations, universities, philanthropists, businesses, private school trusts, and faith communities.[5] DCSF reaffirmed the intention to use BSF as a means to transform education:

> *At the heart of BSF is a desire not only to rebuild and renew individual secondary schools, but also to help LAs to reform and redesign the pattern of education, for example working with local Learning and Skills Councils to best serve each community for decades. It is an opportunity to think differently about all aspects of the process of developing and delivering new schools.*[6]

The Government plan was for the first school to open in mid 2006, with 100 schools opened by the end of 2007, and 200 by the end of 2008. Priority would be given to the areas with greatest educational and social need (**Exhibit 2**). The prioritization formula ordered the projects by the weighted average of the percentage of pupils not achieving 5A*-C, including English and Maths in the GSCEs (attainment indicator) and by an indicator based on the percentages of pupils from families entitled to receiving tax credits and eligible to receiving free meals (deprivation indicator). Funding earmarked for BSF was £2.2 billion in 2005-2006, £2.2 billion in 2006-07, and £2.3 billion in 2007-08. Thereafter, DfES expected that the total investment would increase (in cash terms) to £8 billion in 2010/11, although allocations for 2008/09 and 2009/10 were yet to

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[3] 9HC Deb, 2 July 1997, col 316.
[4] DfES (2005) *Departmental Investment Strategy*. DfES.
[5] DfES (2005). *400 Academies Prospectus for Sponsors and Local Authorities*. DfES
[6] DfES (2004). *Building schools for the future: A new approach to capital investment*, DfES

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be agreed. The funding allocated to each project assumed up to 50 per cent of the gross floor area of a LA's school estate to be new build, 35 per cent major refurbishment, and 15 per cent minor refurbishment. While projects for Voluntary Aided (VA) schools normally required a 10% contribution from the school governors, the DfES funded the VA school governors' contribution for the BSF programme. Additional allowances existed for regional variations in building costs and inflation to the projected start of construction date. Furniture and equipment were funded separately on a per pupil basis, adjusted according to the 50:35:15 split. Funding for ICT was also allocated on a per pupil basis, and covered equipment, service establishment, change management, and infrastructure costs. The floor area required for classrooms, staff rooms, storage, circulation, toilettes, and plant was calculated using the non-statutory area guidelines for secondary schools set out in BB98.[7] Pupil numbers were used in the calculation based on 10-year projections (**Exhibit 3**). The calculation for SEN schools was similar, but used the guidance in the revised BB77 to reflect the requirements for different types of special needs.[8] The funding formulae included a standard allowance for "abnormals, items commonly found in building projects which push up costs beyond those of straightforward construction."

To bid for funding, LAs had to prove they were ready to deliver a programme. This involved a significant investment in skilled resources for LAs, which needed to put together:

- Education Vision (EV) setting out strategic plans for the future of education in the area. LAs needed to develop the EV in collaboration with the secondary schools, particularly at head teacher level, and with other key stakeholders to provide a coherent, shared picture showing how attainment would be raised. The EV needed to demonstrate a joined-up approach to service provision over a long period that was educationally transformational.
- Strategic Business Case (SBC) setting out how the LA would use BSF to achieve its education aims. The SBC should complement the EV with high-level plans to achieve changes in the school organization, individual school visions, buildings, and ICT.
- Outline Business Case (OBC) with plans setting out how the EV and SBC would be implemented and the likely costs.[9] The timetable needed to build in the statutory time for consultation. LAs were expected to set up a high-level BSF Board, a Project Team to deal with the detailed issues, and a consultative Stakeholder group. Schools were expected to be involved in these structures, directly or through a representative.

Once the LA had resolved competition and identified a preferred bidder, it needed to create a Local Education Partnership (LEP) to run the programme. LAs were also expected to set up a

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[7] Building Bulletin 98 (2004). *Framework for Secondary School Projects*. DCSF. This document built upon a DCSF publication of *Exemplar Designs for Schools*, and superseded BB82, a previous publication from 1996. It increased the recommended gross areas for secondary schools to an average of 18% above the maximum in 1996. It considered additional requirements to accommodate disabled and SEN pupils, and community use out of school hours. And it included a further 'float' to 'accommodate the individual priorities of each school.

[8] Building Bulletin 77 (2004). *Designing for Pupils with Special Educational Needs and Disabilities in Schools*. DCSF. This document contained information on accessibility, inclusion and designing for pupils with special education needs (SEN) in mainstream and special schools

[9] From wave 4 onwards, SBC and OBC were combined in one single document, the Strategy for Change (SfC)

Dr. Nuno Gil, Manchester Business School, The University of Manchester, prepared this case as the basis for class discussion. The case does not intend to serve as endorsement, source of primary data, or illustration of effective or ineffective handling of an administrative situation. Specific data, names, and situations in the case may have been intentionally altered.

Strategic Partnering Board (SPB) to govern the LEP and provide a forum for other stakeholders to express their views on the school proposals being developed. The LA, through the Strategic Partnering Agreement, would ensure that the LEP engaged properly with the SPB and considered its views. The SPB should meet frequently throughout the year to keep stakeholders engaged on strategic planning. For LAs, BSF represented a unique opportunity to improve the existing secondary schools. It also offered the opportunity to invest in more ICT to transform educational delivery.

The DfES expected LAs to use a public-private partnership (PPP) model between the LEP, the national delivery body Partnerships for Schools (PfS), and a private sector partner (PSP) unless they could demonstrate better value for money and a more effective method of delivering the new schools (**Exhibit 4**). PfS was the non-departmental agency owned by DfES but jointly funded by DfES and Partnerships UK (PUK)[10] charged to manage the delivery of the whole national BSF programme. PfS was established in April 2004. It encompassed a number of education and design specialists who were available to work with LAs to develop "education visions to create innovative and exciting learning environments for schools". Among other activities, PfS organized an annual conference that brought together delegates from the public and private sector. PfS also posted regularly on its website findings of lessons learned research, and design guidance, e.g., a standard on toilet design to combat bullying in schools was posted in April 2007. In addition, the Government had set up 4PS, the local government project delivery specialist, to work in partnership with LAs to secure funding and accelerate the development, procurement, and implementation of PFI schemes and complex projects in general. In September 2005, 4PS published the report *BSF-– A guide for school governors and head teachers*.

EDUCATION POLICY FRAMEWORK

At the core of the Government policy for education were the Children Act 2004 that provided the legislative framework to set out a reform of the children's services, and the *Every Child Matters: Next Steps* report, published on the same day as the Children Act. The Children Act was passed following consultation on the *Green Paper Every Child Matters* in the autumn 2003. The green paper had been published alongside the formal response to the Report of the Victoria Climbié Inquiry by Lord Laming. A public inquiry had been set up following Victoria Climbié's tragic death on 25 February 2000 and the subsequent murder conviction of her carers. This report set out recommendations to address the root causes of the failure to prevent Victoria's death, which led to the five core goals of *Every Child Matters*: being healthy; staying safe; enjoying and achieving; making a positive contribution; and achieving economic well being.

The Children Act 2004 placed LAs and schools under statutory duties to ensure that all children were fully included, healthy and safe; to encourage children to achieve their full potential and make a positive contribution; and to provide the foundations for their economic well being. LAs were also under duty to take a personalized approach to pupils' learning to help them achieve the

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[10] PUK was a public agency established by the Government to accelerate the development, procurement and implementation of PPPs. It worked with and for the public sector. It was 49% owned by the Treasury.

highest possible standards and to identify and remove barriers for those children and young people who could be at risk of exclusion, marginalization and underachievement. These statutory requirements were coming into effect between 2005 and 2008. The Act required each LA to appoint a Director of Children's Services and to designate a Lead Member for Children's Services with responsibility for all relevant functions, including the arrangements to secure co-operation and establish Local Safeguarding Children Boards. Schools were expected to work in partnership with other organizations across the private, voluntary and community sectors to provide extended activities and support for children and parents, including access to specialist services on school sites. Specifically, LAs should attend to the following policy developments:

- 14-19 education reform

The roots of the 14-19 reform dated back to the Learning and Skills Act 2000 which had provided an entitlement to further education and training for young people aged 16 - 19. This requested schools and colleges to offer high quality provision that would meet the diverse needs of all young people, their communities and employers. As a result, schools started to complement the traditional academic route by offering young people a more practical route of learning based upon vocational GCSEs and apprenticeships. The 14-19 education reform aimed to consolidate further the practical route of learning. It underpinned on a number of documents including the *2004 Final Report of the Working Group on 14–19 Reform (Tomlinson Report)* and the *14-19 Education and Skills White Paper (2005)*. Subsequently, the *14-19 Education and Skills Implementation Plan*, published in December 2005, set out the Government plan to transform opportunities for young people through changes to curriculum, qualifications, and the organization of education and training. The aim was that "every young person will be able to pursue a course of study that prepares them for success in life." Central to implement the 14-19 reform was the creation of a new national curriculum and a qualifications entitlement. The policy aimed that young people from 14 would be able to choose between general qualifications (a 'General Diploma' including English, Math and ICT for those achieving 5 good GCSEs) and a new, employer-designed specialist Diploma in 14 vocational areas.

Jointly with the local Learning and Skills Council, LAs were expected to establish a 14-19 Partnership which would be responsible for ensuring there was sufficient provision of opportunities for 14-19 education in the local area. The Government policy also paved the way for introducing additional roles for high performing specialist schools (HPSS). In the *Five Year Strategy for Children and Learners* published in July 2004, the Government set the aims that: 1) all secondary schools that wanted to be specialist schools would have to meet the criteria by 2008; and 2) around 40 per cent of 14- to 16-year-olds would be doing one or more vocational qualification through the new Diplomas by 2013. The 2006 *Education and Inspections Bill* subsequently put schools under a statutory duty to provide the vocational specialisms.

- The Government 'e-Strategy'

In March 2005, DfES published *Harnessing Technology: Transforming learning and children's services*. At the core of the 'e-Strategy' was the belief on the power of embedding ICT in the curriculum as a means to achieve high quality teaching and enrich the learning experience. DfES believed ICT could encourage pupils to collaborate with one another and take responsibility for their own learning; ICT could help nurture individual talent, independence and a strong sense of self-worth and confidence; ICT could inspire pupils to use their imagination and to spark creativity; and ICT could create contexts for critical thinking, decision making and problem solving that would help pupils develop enquiry and communication skills. In summary, DfES considered ICT a crucial element in the drive to achieve ever higher standards and deliver personalized learning to every child. LAs and schools were exhorted to invest in: 1) suites of specialist classrooms that could embrace drama spaces, digital technology and paper-based learning; 2) sports facilities that could incorporate video and audio links to transmit performance, and where teachers and pupils could analyze individual accomplishment and together build tailor-made programmes for further development; and 3) interactive whiteboards in every classroom to enable teachers to plan 'innovative and exciting' lessons on their laptop and upload them to the whiteboard. DfES guidance also suggested that schools should invest in individual hi-tech 'i-desks', which incorporated a flat screen computer, keyboard, mouse and headset so 'pupils could learn at their own pace, with a range of stimuli'. Desks could be arranged so that the teacher 'could see all pupils' screens in a class—and view them all simultaneously on their laptop—enabling teachers to keep track of every pupil's progress and offer help whenever it's needed'. DfES committed to allocate almost one-tenth of the BSF funding to ICT.

- Policy on Science, Technology, Engineering and Maths (STEM)

The Government believed that world-class scientists and engineers were important for a vibrant economy and to help the UK compete in a global market. The Government's *Ten Year Science and Innovation Framework 2004-2014* made investment in science a priority, and contained measures to improve the uptake of science subjects post-16, improve science attainment (particularly in GCSEs), and the quality of science teaching. The motivation was a skills supply shortage growing at elite and technical levels, fuled by declining uptake post-16 especially in the physical sciences and mathematics, with accompanying shortages of specialist science teachers. Similar problems were facing other developed nations including the USA and Japan. The Government aimed to increase the numbers of pupils taking A levels in physics, chemistry and mathematics; and to improve the number of pupils achieving A*-B and A*-C grades in two science GCSEs. The House of Commons Science and Technology Committee (2001:02) noted that the problem was complicated to resolve, whilst highlighting some studies suggesting that an overly prescriptive National Curriculum with an over riding concern for facts rather than cultural relevance seemed to contribute to put off pupils from the science areas. The follow-up public debate on whether the science curriculum should shift from the traditional knowledge-focused empirical approach towards scientific literacy to help to raise standards and stimulate pupils to progress into science post-16 was, however, inconclusive. Two antagonist views persisted: While some deemed appropriate a more relevant approach

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to science learning, others believed that the more detached empirical approach to be more appropriate. For example, David Perks, Head of Physics, Graveney School, London, argued in *What is Science for*: [11]

> *Evacuating the content of KS 3 science to make space for what amounts to scientific citizenship studies is just prostituting the science curriculum to the concerns of politicians and the media.*

Notwithstanding the controversy, the Government believed that the science curriculum needed to change, and in February 2007, the Qualifications and Curriculum Authority's Science Curriculum Team announced a new Key Stage 3 curriculum for Science that would fit science into 'the whole of school and beyond'. And in May 2007, the National Science Learning Centre organized the conference 'Now Science Works' that brought together key stakeholders in science education in order to discuss the implications of the reform. The new curriculum encouraged schools to set up science clubs and science weeks, to incorporate contemporary science material in the curriculum, and to seek support from the national network of Science Learning Centres. It also exhorted designers in the BSF programme to put together inspirational science classroom designs that would excite children's curiosity and engagement.

- Policy on Inclusion of Special Educational Needs (SEN) Children

Policy for SEN children had a long tradition. In 1997, the Government publication *Excellence for all Children- Meeting Special Education Needs* set out a strategy to improve standards for pupils with SEN. And in 1998, "SEN- A programme for Action" was published, which in conjunction with the 1999 Disability Rights Task Force report *From Exclusion to Inclusion*, strengthened the rights of children with SEN to be educated in mainstream schools. The 2001 Special Educational Needs and Disability Act, together with the DfES SEN Code of Practice (2002) provided a statutory framework stating that a child with SEN should have their needs met, normally in a mainstream setting or early education setting, and should be offered full access to a broad, balanced and relevant education, including a curriculum appropriate for the foundation stage. This guidance set out the principles of an inclusive education by which schools and LAs should develop their cultures, policies and practices to include SEN children. LAs had a statutory duty to enhance education facilities for pupils with SEN and to develop facilities appropriate for those with more complex needs. These principles were reinforced with the publication of *Removing Barriers to Achievement: the Government SEN strategy* in February 2004.

- Policy on Extended Schools

The origins of the Government Extended Schools policy dated back to the commitments to deliver integrated services for young people and their families outlined in *Every Child Matters,* the Children Act 2004, and companion studies. [12] A subsequent Government report, *Youth Matters*

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[11] Perks, D. (2006). *What is Science for?* T. Gilland (ed.) Institute of Ideas; for a review on the debate see DEGE (2007) *Project Faraday. Literature Search*. DCSF.

[12] Cumming et al. (2005). *Evaluation of the full Service Extended Schools Project: End of First Year Report*. DfES; Webb, R and Vulliamy, G. (2004) *Meeting Need and Challenging Crime in Partnership with Schools*. DfES; Wilkin A et al. (2003) *Towards Extended Schools: A Literature Review*. DfES.

published in July 2005, set out a number of proposed measures 'to enable young people to enjoy and manage the opportunities and challenges they faced in a fast paced world as they made the transition to adulthood'. Simultaneously, the Government published the prospectus *Extended schools: Access to opportunities and services for all* and the *Higher Standards: Better Schools for All White Paper*. The emergent policy framed schools as hubs for community services. It also set out a core offer of extended services and activities that the Government wanted all children to be able to access through schools by 2010. (The Government also expected at least a third of the secondary schools to make this offer available by 2008). This offer included homework clubs, study support, volunteering opportunities, community access to schools, music tuition, ICT, sports, dance and drama, arts and crafts, parenting support, adult education, health and social care. The Government alerted that over 2% families in England were officially judged to be at risk of social exclusion, suffering a combination of poverty, disengagement from society, eventual anti-social behavior, and depression. Children from these families lacked the social, emotional, and entrepreneurial skills required to develop relationships for learning and move into employment. The extended schools policy aimed to help schools which faced a culture of low aspiration and ambition in the communities they served. It also aimed to resolve the situation where families at risk could receive services from up to 8 arms of government. The policy gained force after the Government passed the Education and Inspections Act 2006. The bill set out a legislative framework for continued improvement of education focusing upon raising standards, introducing diversity of provision, promoting achievement, and securing greater access for those in disadvantage. The Act also recasted the role of LAs as 'Commissioners' of school places. This gave LAs a statutory responsibility to secure diversity in the provision of schools and to increase opportunities for parental choice. It also gave LAs decision-making powers in regards to school organization and powers to intervene in failing schools to drive up standards.

Subsequently, the Government's 2007 report *Children's Plan – Building Brighter Futures* placed the role of schools in the context of the wider needs of the child and family, 'marking the culmination of much policy and legislation over the past 10 years'. The plan announced a "new role for schools as the centre of their communities, more effective links between schools, the National Health Service, and other children's services so that together they can engage parents and tackle all barriers to the learning, health and happiness of every child". Priority groups for investment included those at risk of teenage pregnancy, NEET (Not in Education Employment or Training), drug misuse, and youth offending.

- Policy on Personalized Learning

At the core of personalized learning was the question "what is school for?" The seminal ideas could be traced to 'think-pieces' produced by three groups: Innovation Unit, a governmental unit providing strategic direction on innovative responses to learning-related challenges facing the education system; Demos, an independent think-tank working for education projects; and National College for School Leadership, a public body aimed at encouraging national and

international debate on leadership issues.[13] Taken together, these think-pieces framed personalized learning as a means to reform an education system 'that still exhibited features of its 19th century origins...and echoed the Fordist principles of standardized mass production'. These studies framed the existing education system as one where a series of tests at key stages provided information for league tables of performance. This was believed to push up performance, while giving inspectors the means to identify and root out poor performance. They argued that the existing system rewarded teachers who could get children through national tests, making good test results the system's goal rather than a one measure of achievement. They also argued this system disadvantaged children most likely to be turned off by academic subjects and traditional teaching. But this system had led to two fundamental problems, suggested educational data:[14]

- Achievement Plateau. Improvements in educational attainment, namely in Key Stage tests in English and maths, seemed to have hit a plateau after the early gains between 1995 and 2000 which were driven by higher funding and new nationals strategies;
- Deep-seated social inequalities. The attainment gap between pupils from different social backgrounds remained at much the same level as in 2006; only 19.5% of those eligible for free school meals were getting five good GCSEs including English and maths; and only about 17% of pupils whose parents were in the bottom income quartile went to university.[15]

The calls for personalized learning built upon two key premises: First, in economies driven by the capacity to innovate, combine and recombine ideas, skills and resources, people needed social and cognitive skills to work together flexibly and creatively. And second, the current education system fitted poorly with a digital society. Whereas the Web and mobile phones allowed people to search for and access information from many sources, the existing education system imparted a fixed body of knowledge and skills from the top down through a series of pre-set stages. Instead, the advocators of reform argued, schools should recognize children for who they are, where they come from, their goals, contributions and achievements, i.e., to build 'economies of regard and respect' where learners could build a reputation for their identity and achievements.[16] This approach put 'learners' at the centre of the education process. It would equip them to search and sift information for themselves, and teach them to open up their minds. Schools should also allow learners to have more choice over their learning pathway, to construct their curriculum from a range of choices, both vocational and academic, and to move along their pathways at a pace that suited their abilities and circumstances. This would turn learners into 'active participants in the shaping, development, and delivery of education, ultimately co-producers and co-designers'. Schools, in turn, would become 'solutions assemblers' where the role of teachers shifted from

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[13] Leadbeater, C. (2004). *Learning about Personalisation: How can we put the learner at the heart of the education system?* DfES; Bentley, T. and Winlsdon, J. (2003). *The Adaptive State: Strategies for personalising the public realm.* Demos; Leadbeater, C. (2004). *Personalisation through participation.* Demos; NCSL (2007). Changing *Boundaries.* DEWG and Demos.

[14] Marshall, P. (2007). *Tackling Educational Inequality.* Centre Forum policy paper.

[15] In contrast to almost 50% in the USA

[16] Offer, A. (2006). *The challenge of Affluence: Self-Control and well-being in the United States and Britain since 1950.* OUP.

'delivers' to 'facilitators' or 'brokers' working with other staff and companies to assemble solutions personalized to individual need. Through an extended dialogue, teachers would work with learners to help unlock their needs, preferences, and aspirations. This required changing[17]:

- time of learning, allowing it to happen earlier or later, in longer or shorter periods;
- pacing of learning, allowing some pupils to accelerate ahead of their age while allowing others more time to embed their learning;
- settings for learning, providing rooms where small groups could meet around tables, rooms for 60 pupils at a time, and opportunities to learn outside the school;
- style of learning, ranging from instruction and directed learning to more independent and inquiry-led learning, and drawing on expertise in the community to deploy a wider range of skills and people beyond the teaching staff;
- aims of learning, developing curricula based on capabilities, and social and learning skills such as resilience, responsibility, and resourcefulness;
- technologies for learning, using computers to access virtual learning platforms, at home and in class, and encourage the use of bulleting boards, message groups, and wikis.

The advocates of the reform deemed the bespoke, labor intensive and personalized learning approach particularly suitable for the poor, least motivated, most disaffected and vulnerable pupils who would come to school poorly slept, washed, dressed, and fed, victims of violent instability; and who were excluded or at risk of being excluded.[18] Personalized learning would make these pupils feel better cared for, safe and secure, and better able to look after their own emotional needs. It would offer rewards and recognition for their achievements which would help them learn, set realist but stretching goals, build up confidence and capability.

Along these lines, the Government published the *Youth Matters Green Paper* and *Higher Standards: Better Schools for All White Paper* in 2005 where it recommended schools to adopt personalized learning through the adoption of 'broader, flexible and enriched curricula suitable to the demands of the 21st Century'. The Education and Inspection Bill passed in 2006 took forward the proposed changes, and set the path for a process of educational transformation building upon the notions of specialist schools, extended schools, and personalized learning. The *2020 Vision: Report of the Teaching and Learning Review* published in 2006 put personalized learning as a central facet in the transformation of England's education service. It defined it as 'a learner and knowledge-centred approach' which connected to the existing knowledge of pupils. It placed greater focus on independent learning, inquiry and thought, involving techniques such as questioning and sharing learning objectives. The report noted that personalized learning called for learning environments which were flexible and welcoming for parents, emphasized participation and collaboration; supported interaction and knowledge sharing; and were technology rich.

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[17] Leadbeater, C. (2008). *What's next? 21 Ideas for 21st century E-Learning* The Innovation Unit.
[18] ibid.

NATIONAL GUIDANCE ON SCHOOL DESIGN

The *Classrooms of the Future* report published in 2003 was one of the first initiatives of DfES to help create 'innovative and imaginative environments that can stimulate learning and inspire children'.[19] The drivers for innovation in design were developments in ICT, the inclusion of SEN pupils in mainstream schools; the need to stimulate children to achieve more, changes in the organization of classroom environment (teaching variable sizes of groups of children, virtual classrooms, communities of learners, tailored education), and schools open to community use. The 2003 report argued that schools needed to be delightful and relaxing places to learn; to have spaces with flexibility to facilitate various patterns of group work; to have walls that opened up to the outside and roofs that opened up to the sky; to feel fresh, safe, and new; to have lots of natural light and fresh air. The government hoped the distilled lessons would feed and shape future schools designs. Notable features of the pilot school projects, the majority of which would be completed in 2003, included sustainable centres of e-learning and environmental discovery; state-of-the-art ICT classrooms; and self-contained hi-tech re-locatable buildings.

In 2004, the DfES commissioned a set of exemplar designs covering a range of types and locations of schools. The aim of this drawing-board exercise was 'to encourage the development of a shared vision, create benchmarks for well-designed schools, and push forward the boundaries of innovation and inspiration.' These designs (including five secondary schools) were created by leading architectural practices and made available in a 'compendium of designs' without copyright restrictions.[20] The compendium also included cost studies, guidelines to proceed with design detailing, and schedules of accommodation. Design highlights included flexible spaces that could be used in traditional format or as a large open plan; social spaces; class-bases without doors; re-locatable 'learning pods' for individual study; movable partition walls; play decks; mobile classrooms; technology-rich laboratories; and themed learning centres. One exemplar design showed traditional learning clusters (requested by user groups) which the compendium suggested may not address a common need for adaptability. The compendium also recognized that desirable features such as covered courtyards could be above the BSF budgets, and that the acoustical implications of some open spaces had not yet been fully tested.

Simultaneously, CABE and the Royal Institute of British Architects (RIBA) produced the *21st Century Schools Learning Environments of the Future* report through the Building Futures Group (2004). The team illustrated four provocative scenarios for learning environments in 2024, ranging from: 'the network of learners' where learning would be entirely on-line (school buildings would be limited to an administrative suite) to the 'fortress school' where teachers would monitor, teach, assess, and lead, whilst the students would learn, perform, attain, and follow' (a single campus school with rigid security protocols).[21] Still, the report concluded that learning environments of the future should be (**Exhibit 5**):

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[19] DfES (2003). *Classrooms of the future. Innovative designs for schools.* DfES

[20] DfES (2004). *Schools for the Future. Exemplar Designs. Concepts and Ideas*. DfES.

[21] This exercise built upon the 2001 OECD report 'What Schools for the Future?', which included scenarios such as 'de-schooling', 'status-quo', and 're-schooling'

- Flexible at different scales, allowing for variation in use, occupancy, and layout;
- Inspiring to those working, learning and visiting, and embodying organizational aims;
- Supportive of effective teaching and learning, and accommodating a wide range of experiences and activities;
- Involving of the users and the wider community, and linking with other educational and cultural establishments.

A similar call for teacher involvement in design was spelled out by the Design Council (2005) in *Learning Environments Campaign Prospectus: From the inside looking out*. This report argued that the lack of user involvement in the extensive school building in the 1960s was likely to have contributed to dissatisfaction and retrenchment. It also argued that school designs needed to be linked to learning aims, and that the standard classroom design needed to be reformed as it undermined the value placed on learning. Standard designs also hindered creativity, reduced the range of teaching and learning styles possible, and failed to adapt to individual needs.

In 2006, CABE published a report assessing the quality of the designs of the secondary schools built over the last five years.[22] The report stated that the design quality wasn't good enough to secure the government's ambition to transform children's education. It also stated that 'too many of the mistakes of the past look like being repeated in the first waves of BSF schools'. CABE audited 52 of 124 completed schools, having assessed 50% as poor or 'mediocre'. It concluded that despite exemplar design guidance, standardized contractual documentation, and the use of design quality indicators, there weren't enough schools being designed that "are exemplary, innovative, inspiring, innovative, or flexibly designed to allow for a diversity of approaches to education in the future." (**Exhibit 6**) CABE argued that 'with very few exceptions, schools performed badly on transformational design and on basic issues of environmental sustainability. CABE also suggested that 1) the message about transformational design was getting lost in a procurement process that was more concerned with cost and time; 2) LA design champions were ineffective; 3) head teachers lacked awareness of the transformation agenda; 4) not enough weighting was being placed on design quality in evaluating bids; 5) bidding periods were too short; and 6) affordability issues were putting off project teams from innovative designs. CABE exhorted LAs to take teachers to inspirational buildings and expert seminars, to make lowest whole-life cost mandatory rather than lowest capital cost; and to ensure designers had a track record of design excellence in complex building projects or the education sector. It also exhorted DfES to make it mandatory to appoint a CABE enabler at the outset of a BSF project.

- **Exemplar designs for Science**

The Robert's review Science, Engineering, Technology (SET) for Success published by the DTI in 2002, and the STEM Programme Report published by the DfES in 2006, both urged the Government to produce exemplars of science lab designs that would excite children's curiosity and engagement. These calls

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[22] CABE (2006). *Assessing secondary school design quality Research report.* CABE

triggered the Faraday project for promoting school science facilities. New designs should:[23] 1) support more interactive and exciting ways of teaching and learning; 2) reflect the requirements of the new science curriculum; and 3) exploit the whole school building and its grounds, not just the laboratories themselves. Three teams of designers and educationalists each partnered with two BSF schools that were being re-built and provided advice to six other refurbishment projects. Their review of science lab design uncovered a long tradition of research that explored why children could find science hard to learn. This literature suggested that children looked at science through the 'glasses of their own preconceptions" and were put off by a "discontinuity between school science lessons and the rest of their lives".

The Faraday exemplar designs proposed reconfigurable areas (capable of having two groups of 30 students being taught at the same time, or being used for 100-pupils lessons), large open spaces, creativity pods, technology-enabled carrels, stackable seats, laptop-enabled group snugs, mobile demonstration benches, self-contained mini-labs, and a strong emphasis on IT (interactive white boards, ceiling-mounted projectors, high-spec PCs). They also combined two, three fully-serviced labs ('super-labs') with a few science theory studios and practical work spaces (to support practical work that didn't require a fully serviced lab). (**Exhibit 7**). This design approach assumed that science teaching would move between the different types of spaces according to the exact content of the lessons. The Faraday report acknowledged that effective use of these spaces required science staff to work in less conventional ways. It also stressed that there was enough flexibility in the BB98 to accommodate innovate approaches.

THE MANCHESTER BSF PROGRAMME

Manchester was both one of the fastest-growing economies and one of the most deprived areas in England. The proportion of its population from ethnic minority backgrounds was projected to rise from 21% in 2004 to 28% by the time of the next census. Within Manchester schools, 150 languages were spoken, and nearly 30% of the households had children receiving free school meals. The levels of unauthorized schools absence placed the LA near the bottom of national tables for school attendance. And an average of 47.7% of young people achieved the Government goal of 5 GCSEs with grade C and above compared to the national average of 58.5% in 2006. Officials estimated that 10% of the school population was in danger of becoming NEET. The leader of the Manchester City Council (MCC), Richard Lease, firmly believed on the power of reforming education as a means to move the economy forward: "to create new jobs, we must create a different kind of education - one that meets the needs both of the employer and of the individual". Government agencies such as the Enhanced Youth Service Inspection were already working with MCC to crack the cycle of educational underachievement.

MCC learned that the bid it submitted to the BSF programme had been successful in April 2004. In the summer 2005, the Government approved the procurement and strategic business cases submitted by MCC, and early on in 2006 it approved the outline business case. The £450m Manchester BSF programme would build anew or refurbish 27 schools and 6 academies between 2006 and 2012. Wave 1 included 9 secondary mainstream schools and seven SEN secondary schools (total investment £200m). The wave 1 design started in 2006, and the first schools were

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[23] DSCF (2007). *Project Faraday. DEGW Visit Report*; DSCF (2007). *Project Faraday Literature review*; DSCF (2007) *Project Faraday. Compendium of Exemplar Designs*. DSCF

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expected to open in September 2008. BSF wave 4 included 7 additional mainstream secondary schools and 2 SEN secondary schools (total investment £100m), and design was planned to start in late 2008. The other 6 schools would be academies (total investment £200m). In April 2006, MCC published a prospectus on seeking expressions of interest for the academies. And in September 2006, it received the final proposals. Concurrently, MCC initiated a major review of the education services department as part of its Services Improvement Programme in July 2006. This aimed to re-define and re-align the rationale and service design principles for the delivery of Education Services, involving the recruitment to the five strategic lead posts for inclusion, 14-19 strategy implementation, parent support, specialist resources, and afterschool study.

MCC had experience in delivering school projects. In the last years, it had already developed 3 secondary schools. Hence, MCC opted not to develop the BSF schools through a PPP. Instead, its Local Education Partnership (LEP) integrated two main construction partners – Balfour Beatty and Laing O'Rourke - which were part of the MCC framework to deliverer education-related projects (**Exhibit 8**). The LEP also included a Facilities Management (FM) partner and an ICT partner, Ramseys, the later appointed in September 2006. Commercially, the schools would be delivered through a reimbursable design-build contract with the construction partners with agreed mark-up, agreed overhead, and a target cost for each school. The savings relative to the target cost would be spilt 50-50 between MCC and the contractors; likewise, an overspent above target cost would be incurred 50-50. In October 2006, the Council and PfS signed contracts on their first BSF project, a brand new community campus in Gorton, East Manchester.

The Manchester Education Vision was very much aligned with Government policy. MCC wanted schools to place the learner at the centre, give learners a high degree of choice, and make them engage with career planning and learning. The statutory Manchester Children and Young People's plan 2006-09 exhorted schools to shift from 'bells, sitting still for long periods, pupils being herded around, disruption and bullying, no time for reflection' towards allowing *learners* to choose what and how to learn and help them develop skills to be good networkers, good team players, multi skilled, global citizens, ICT confident, and creative. MCC also envisioned ICT as a gateway to personalized learning through which learners could have an engaging, interactive, and personalized programme of study, and develop their own specialisms.

MCC also wanted its schools to promote well being and provide sense of place and identity. Manchester schools were expected to develop community hub statements wherein they showed their strategy for providing extended school activities and build a sense of community. MCC expected schools to go beyond just a centre for teaching, where pastoral care was an add-on or afterthought to teaching, to develop programmes that developed child's emotional resilience. MCC aimed to reduce the number of 16-18 years olds who were NEET, reduce youth nuisance and anti social behavior; reduce the number of young people involved in crime; and reduce number of teenage parents. It also expected schools to recognize that many children lived in highly dislocated families and required one-on-one sessions with a personal mentor to develop motivation, self-esteem, and confidence. The Council's director of Children's Services described

these social soft skills "the glue that holds everything else together". And as part of the 14-19 reform, MCC was working with schools to put in place various progression routes, including the 14-16 Reengagement programme, the Entry to Employment, and Youth Apprenticeships, and specialists diplomas. It was also spending over £1m a year on intensive parenting programmes for parents whose children face a high risk of being excluded from school or being taken into care (Although the LA estimated it was reaching just one per cent of the families it needed to reach).

To help deliver its vision for education, MCC appointed an 'Education Transformation Team' (ETT) with staff seconded from high schools in September 2005. This team comprised three former teachers knowledgeable about the BSF learning transformation agenda. At the early stages, the team worked with each school to elicit the needs and ideas of teachers and incorporate those in the Manchester Education Vision. Once the design process started, the ETT became responsible to work with head teachers and the school senior management teams to drive their visions, and ensure that the schools would be capable to deliver the visions:

I'm a bridge between design teams and schools. My task is to speak to head teachers and faculty leaders and draw provisions for what they want their school to provide, and how they are going to do it. This isn't in terms of what they want the building to look like. It's much more visionary, what they want people to learn (ETT lead officer 2007)

The team knew this was a difficult task. The lack of evidence proving the effectiveness of the recommendations in the BSF guidance could make it difficult to persuade sceptical teachers:

The big thing head teachers say to us is 'Show me where it's working?' Well… there aren't any great examples actually. There are some examples where it works well, but it's early days, there's no assessment data yet correlating with where students are today, and some of these areas aren't necessarily as deprived as Manchester. There's some evidence in the US, but it's on 200-pupil schools whereas we're trying to do it in bigger state schools. We think it will work. Senior people in the education department think it's going to work. (ETT project development officer 2007)

Mindful of the issues, MCC aimed nonetheless to spend not much more than one year designing and developing a new school. It allocated two-months for a pre-design period during which the design team engaged with the school senior management team to undertake site surveys, put together a design brief, explain the BSF framework, and shape the education vision of the school. This document ought to include a community hub statement and a programme to deliver the curriculum aligned with the education transformation agenda. The design team had then about 2 months to agree the schedule of accommodation and design outline, develop a number of design options with budgets, present them to CABE, and agree with the school design steering group which option to move forward. In the subsequent 4-5 months, the design team was expected to develop floor plans, elevations, and cross-sections; prepare bill of quantities and cost plan; get the school steering group to sign off the drawings; freeze full room data sheets, develop structural, mechanical, and electrical concepts; and prepare and submit the planning application. In the next 5-6 months, the design team should detail the designs, refine the target cost for construction, and

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prepare to start work on site. Construction could start once the school design steering group signed off the design documents. This steering group comprised members from the project design team, the school senior management team, and the most senior leaders of the LA.

THE TEACHER'S VIEW

From the beginning of 2004, teachers started receiving information about the Government education transformation agenda, and how it impacted specifically on the BSF programme. DfES posted regularly on www.teachernet.com the new policy documents and design standards aligned with the Every Child Matters framework. Links were also built in to the sites of other parties such as CABE and PfS. Public agencies also organized annual conferences and BSF networking days. The DfES/PfS Design for Learning conference, for example, started to run in 2004 aiming to bring together "designers, architects, contractors, LAs and head teachers to ensure that the huge level of investment in school buildings results in well designed and inspirational buildings". Some head teachers welcomed the transformational agenda:

Some schools will have intelligent pupils coming in, the traditional curriculum has always worked, it gets good exam results; and it always will with bright students. But if you happen to be in an inner city area, where students coming in cannot read or write in year 7, then you've to find ways to engage them to get them in. If we make the school interesting, a nice place to be, a place engaging, energetic, they're more likely to want to cross the threshold, and when they cross the threshold, we can then work with them. But they aren't going to cross the threshold if all they're going to get is sitting in a box and 30 people being told you cannot do this or that (Head teacher, spring 08)

Other teachers were less convinced about the fit of the education transformation agenda with their own schools. Some teachers did not see themselves as tenants in their schools. Instead, many saw themselves and the children as the true 'clients' in the BSF programme, and felt frustrated that the LA owned the budgets for delivering the new schools. They also felt they had the right to disagree with the design guidance coming from the Government:

Sometimes it feels decisions were made on other schools and we've to accept them. But every school is different. I think there was a false premise that you could make decisions at the centre and impose those on schools. Every school has its own unique ethos, its own approach to deal with youngsters. What would be the point of parental choice if all schools would be the same? (Deputy head, winter 07)

There was a lot of wasted time in BSF with conferences, consultants, speeches, dinners and venues...that money could have been better served putting into consultations with staff later on in schools. The agenda to transform learning is a good thing. We ought to be doing it, but it shouldn't be tied on to every initiative because it doesn't necessarily fit (Head teacher, spring 08)

At the implementation level, some teachers thought that design standards such as BB98 were obstacles to generate budgets for new schools adequate to deliver the aspirations of the Government policy. They deemed the funding formulae lacked flexibility to accommodate the different services and activities that their schools offered to meet the needs of their communities. Some teachers also complained that formulae underestimated the square footage required to implement the learning transformation agenda:

We don't have our own budget; we're told there's no additional contingency; we're told there are

Dr. Nuno Gil, Manchester Business School, The University of Manchester, prepared this case as the basis for class discussion. The case does not intend to serve as endorsement, source of primary data, or illustration of effective or ineffective handling of an administrative situation. Specific data, names, and situations in the case may have been intentionally altered.

£14m for the new build based on the formula. But the formula is massively flawed. It has been in place forever. The formula doesn't take into account differences between mainstream and specialist schools. Our school is a resource provision for children with severe learning disabilities, and with physical disabilities. If you think the changes in space these children need...we've 3 specialisms, we've additional targets to meet. We do things in different ways, but the formula doesn't take into account any of these initiatives. Everyone knows these flaws but the money has already been allocated, and no one is going to do nothing, but it isn't fair" (Deputy head, 07)

More specifically, many teachers─but certainly not all─ were unsure about the call for open plan layouts as a necessary means to deliver the 14-19 reform and personalized learning. Some teachers were wary that open layouts could make it difficult to control youngsters' behavior, especially if schools were located in deprived areas. Some were also concerned that open layouts would generate many acoustics problems, and even health and safety issues:

We don't need open layouts for personalised learning; the arguments that are behind these decisions, I think, are wrong. Personalised learning, learning pathways, individual pathways, project-based learning: This is something it has been part of our daily lives for a number of years. People in schools are very good in mending and making do, and have adapted to a whole host of changes without changing the physical environment. You need the right people in place, the right pathways, the right partnerships with the local businesses to do it (Deputy head, summer 07)

If you've been around in education for long enough, you'll know that there'll always be lots of innovations, and as with everything else we're on this cycle that goes around. If you wait long enough, what was tried and tested a few years ago will be back in because it works and you changed for something that hadn't been proven to work, and then you go back to more traditional methods (Deputy head, summer 07)

Still, other faculty heads were more amenable to open plan layouts:

The art department went for open plan, and I think it's good. The staff wanted different ways to be able to group and change pupils. The art rooms are in a space between staircases, and in that space, you can move internally freely between the three art rooms once you go in; it's a big space subdivided in 3 areas but not fully across. So they don't need to triplicate resources across 3 classrooms. When staff will be setting up resources for the youngsters to use, the youngsters will have a lot of independence about which resource they want to work (Deputy head, winter 07)

We wanted to open up the spaces, give pupils the opportunity to have freedom within learning zones because they learn very differently in our days. You've to ask yourself 'what is knowledge these days?' Knowledge is knowing how to get the knowledge, to have the independent thought to make the transition through the learning (Assistant head, head of arts, spring 08)

Likewise, the guidance for science lab design received mixed responses from the science heads. Some were skeptical about it and dubious about the practicality of substituting the traditional 7 to 8 science labs with 2, 3 fully-serviced super labs equipped with ICT kits, and a few classrooms equipped with serviced desks only at the periphery. This could be so to the extent to which they perceived the new ideas as an expedient to economize on the construction costs. The end result was that the design of wave 1 science labs was quite traditional apart some exceptions:

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We had a meeting when we discussed the layout of new science labs, and planners wanted to push us into open plan labs where you can walk from one learning area into another, less walls. Our head of science didn't dismiss the idea but was quite flabbergasted. We resisted that, and actually got what we wanted (…) Our science results have been exceptionally good. So why change for the sake of change? We don't want our children to be experiments. Everybody only gets one chance in education (…) We were in a really strong position because the school itself is doing exceptionally well, perhaps that gives us a bit more weight to what we're saying. Because we actually know what we're doing, so we should have some freedom to deliver in the way we want to (Deputy Head 07)

Notwithstanding the lack of evidence, at least one wave 1 school supported the new approach:

A big issue we've with science – and I'm a science teacher myself - is that we teach a lot of theory, a lot of concept, with lots of little demos, and kids hate to be in labs having theory lessons because it's uncomfortable, all kids fiddle in lab when they sit in stools. We'll have 6 science classrooms set up with a fully-serviced demo bench and a visualiser to project on white board, and 2 labs which will be basically a bookable resource. Teachers will do theory in the classroom, and then book the lab. People will have to move in and out, which they don't like it, but we're going to have this sort of movement... the super-labs, we want them to be kitted out to a very high standard, by goodness, we want them to be super duper labs - I promised it to my head of science (Deputy head, winter 07)

Another issue where controversy with teachers surfaced involved the implementation of the extended school policy for VA schools. Unlike comprehensive schools, schools such as Catholic and Jewish faith schools considered their extended communities to be less their geographical neighbors, and more their communities of faith which were spread out widely:

We have LA expectations, such as having a baby change room because they want community use, but we aren't a community school. The land and the buildings don't belong to the LA, they belong to the diocese. In effect, there will be little community use of the facilities in the future because although they want it, they also don't give us the budget to run caretakers and heating and lighting outside school hours. Community use has budgetary implications. (Deputy head 07)

In contrast, the extended school policy provided a good fit with a SEN school which proud itself for encouraging and expecting teachers to be innovative, daring, and willing to incur risks. This school also brushed off remarks suggesting they were frivolous or just going into the bandwagon:

We don't want a school that is just open a few hours a day; it's a waste with the facilities. We've different groups approaching us: footfall clubs, the philharmonic, mother and toddler groups, adults in the community with disabilities... It's not just income generation, it's about the community in this area seeing us as a focal point (…) We know that in doing it, we'll have people thinking of what resources may be of interest to him. This is one of the highest crime areas for knife and gun crime nationwide. So security needs to be welcoming but highly visible (Head teacher, spring 08).

Despite the difficulties in the process of resolving the new school designs, teachers would rule out unanimously a scenario where they would have a smaller share of voice in design decision-making. 'This is a dream come true', remarked one head teacher. This notwithstanding the huge investment in resources which design involvement meant to schools. One deputy head (who termed 'immoral' the LA charging interest on a loan for the school to add a covered courtyard to the project) summarized their position after moving into the new school facilities:

Hadn't we been involved, the school would be different, I'm sure. We would end up with a three storey building and stairs at either end which would be difficult in terms of behaviour management (…) We came with the idea of a huge, safe, pleasant toilette block inside the school, girls on one side, boys in another, and an office for an hygiene officer, doing away with urinals (…) Whether we're going to be here or not in 5 years doesn't make any difference. There's got to be some investment in the people that are investing more of themselves, there has to be an appreciation to what they're doing, and those people have to be listened to (Deputy head, summer 08).

Head teachers of SEN schools were equally adamant that their involvement in design was crucial:

They [designers] couldn't have done it without us, they don't have the understanding of SEN; we aren't a very big market, are we? They don't understand about sensory resource spaces, about low distraction/calm room requirements for autistic pupils - they thought they are very dull, they are meant to be! All of those things. Some of them have never been in a SEN school, why should they really, that's why we need to move to a mainstream campus, isn't it? (Head teacher, spring 08).

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As Ryan cycled downtown he reviewed some other developments affecting the BSF programme. Clearly the budget for the wave 4 projects was going to be an issue. The LA was already spending £15.3m above the standard funding formula of 50-30-15 due to the poor condition of the wave 1 schools. And abnormal costs needed to meet with Design for Access 2 requirements had reached £3.8m in wave 1. This over allocation would have to be deducted from the wave 4, which included some new schools for which BSF would only fund new ICT infrastructure. In addition, developments towards making schools environmentally sustainable suggested budgets would become even tighter. First, statutory requirements to reduce the building CO_2 emissions were 25% more stringent than those assumed in BB98 calculations. And second, MCC had issued a *Guide to Development in Manchester Supplementary Planning Document and Planning Guidance* (G2D2 for short). This was applicable to all planning applications posted post April 2007, and called for an additional voluntary reduction of 25% in CO_2 emissions. This aimed to make Manchester the greenest city in Britain. But while the Government was providing additional funding (£0.5m/school) to help designs meet sustainability requirements, project teams anticipated this would not be enough to comply with the targets Manchester had self-imposed.

Surely, the school senior management teams in wave 4 weren't going to have all they wanted. Moving from the desirable to the realizable promised difficult negotiations. Still, Ryan thought, there hadn't been a single case yet where MCC had overruled the schools whilst trying to steer them in specific directions. But if BSF funding was LA funding at the end of the day, and the average tenure of a head teacher lasted 6 years, should schools really have a final say in design and the power to sign off drawings? Or should MCC say instead "you're our chief stakeholder, this is what we require from you as we consult you, and this is what we're going to deliver'?
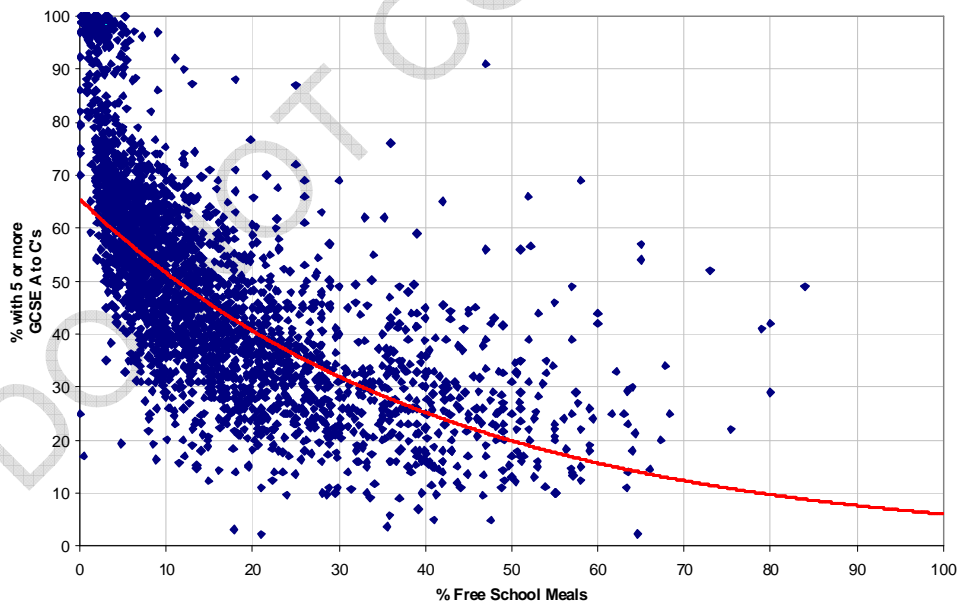
20

Exhibit 1 – Capital Investment in Britain's schools, 1965-2008
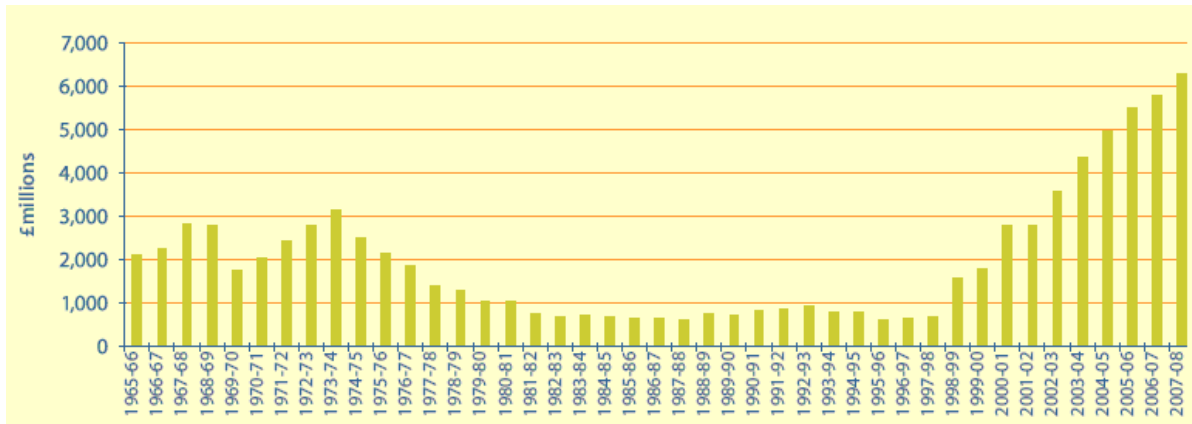
DfES (2006). *Better buildings, better design, better education. A report on capital investment in education.* DfES
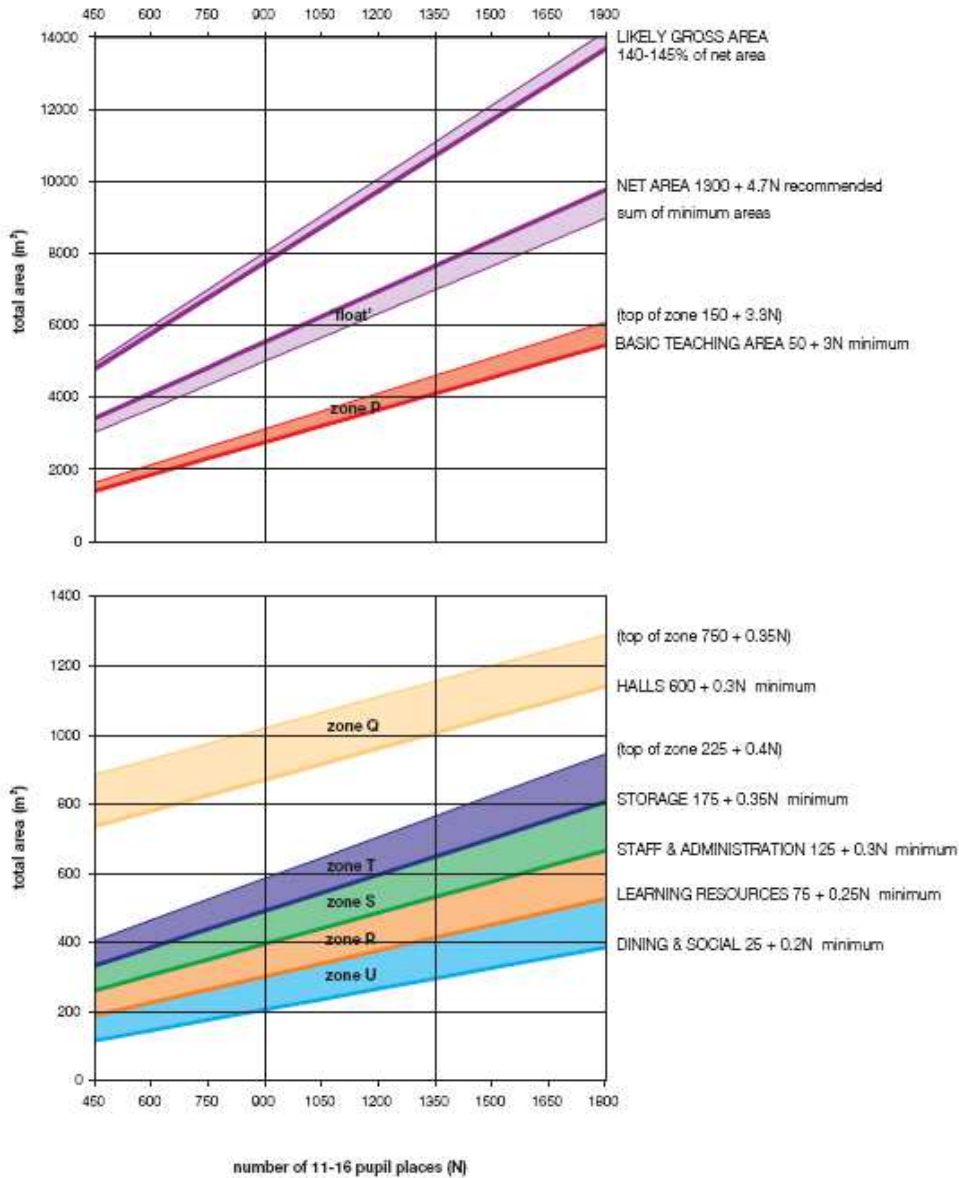
Exhibit 2 - BSF programme prioritization

Dr. Nuno Gil, Manchester Business School, The University of Manchester, prepared this case as the basis for class discussion. The case does not intend to serve as endorsement, source of primary data, or illustration of effective or ineffective handling of an administrative situation. Specific data, names, and situations in the case may have been intentionally altered.

Exhibit 3 – BB98 graphs showing recommended areas in 11 to 16 schools
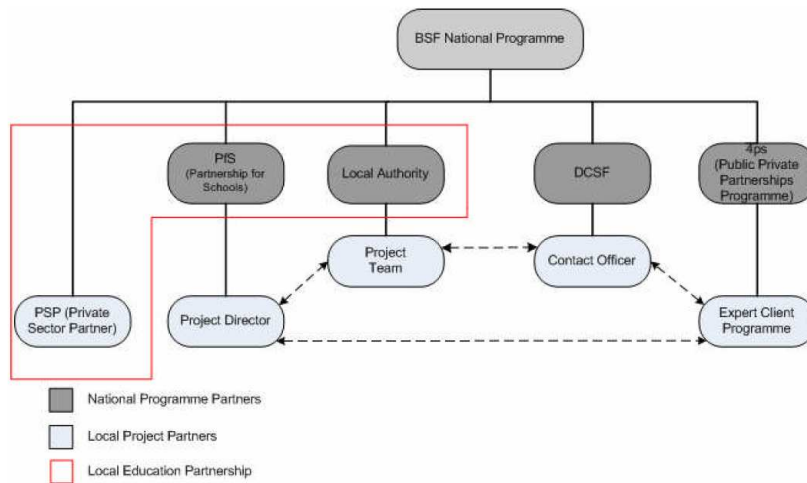
Figure C.2: 11-16 net and gross area

Graphs showing recommended areas for total net and gross area, and categories of net area in 11 to 16 schools. Note that the areas in the top graph are at a different scale to those in the lower graph (so that the basic teaching area, zone P, is usually more than all the other areas put together).

LIKELY GROSS AREA 140-145% of net area

NET AREA 1900 + 4.7N recommended
sum of minimum areas

(top of zone 150 + 3.3N)

BASIC TEACHING AREA 50 + 3N minimum

'float'

zone P

total area (m²)

(top of zone 750 + 0.35N)

HALLS 600 + 0.3N minimum

zone Q

(top of zone 225 + 0.4N)

STORAGE 175 + 0.35N minimum

STAFF & ADMINISTRATION 125 + 0.3N minimum

zone T

zone S

LEARNING RESOURCES 75 + 0.25N minimum

zone R

DINING & SOCIAL 25 + 0.2N minimum

zone U

total area (m²)

number of 11-16 pupil places (N)

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Exhibit 4- Programme delivery model recommended for BSF delivery

PfS (2007) Insite: Partnership for Schools Quarterly. Summer.

Exhibit 5- Emerging themes for schools of the future

	TRADITIONAL MODELS?		EMERGING MODELS?
SPACE	Dedicated teaching space	>	Non-dedicated space (shared with other uses)
	Specialised teaching space	>	Multi-purpose teaching space
	Centralised accommodation	>	Dispersed accommodation
	'Within' school (under school control)	>	'Beyond' school (outside of school control)
	Fixed infrastructure (equipment and facilities)	>	Flexible infrastructure (adaptable, portable, individual — e.g. ICT)
CULTURE	Process-focused (management and measurement)	>	Student-focused (individual development)
	Student-centric (11-18)	>	Community-centric (lifelong learning)
	Defined subjects (traditional curriculum)	>	Flexible subjects (broad suite of subjects and vocational studies)
	Inward-looking (school boundary and remit defined)	>	Outward-looking (involvement, links and partnerships beyond the school)
LEARNING	Social interface (educator-student relationship)	>	Technological interface (access to learning via ICT)
	Pupil-teacher relationship	>	Learner-mentor relationship (other adult, specialist, peer mentor)
	Place-centric (specific learning is located at specific venues)	>	Student-centric (flexible access to learning is not location-specific)
	Generic mode of teaching and learning	>	Customised modes of teaching and learning
	Didactic ('delivery' of knowledge from educator)	>	Interactive (2-way learning transaction)
TIME	Permanent (design life)	>	Temporary (design life – short-term residency)
	Traditional school day (fixed hours of attendance)	>	24/7 (flexibility in hours of attendance; 'shifts')
	Generic timetable	>	Modular and customised timetable (individualised learning programmes)
	Fixed lessons	>	Flexible lessons

Building Futures Group (2004). *21st Century Schools Learning Environments of the Future*. CABE and RIBA.

Exhibit 6- CABE (2006). *Assessing secondary school design quality. Research report*

How good are new schools?
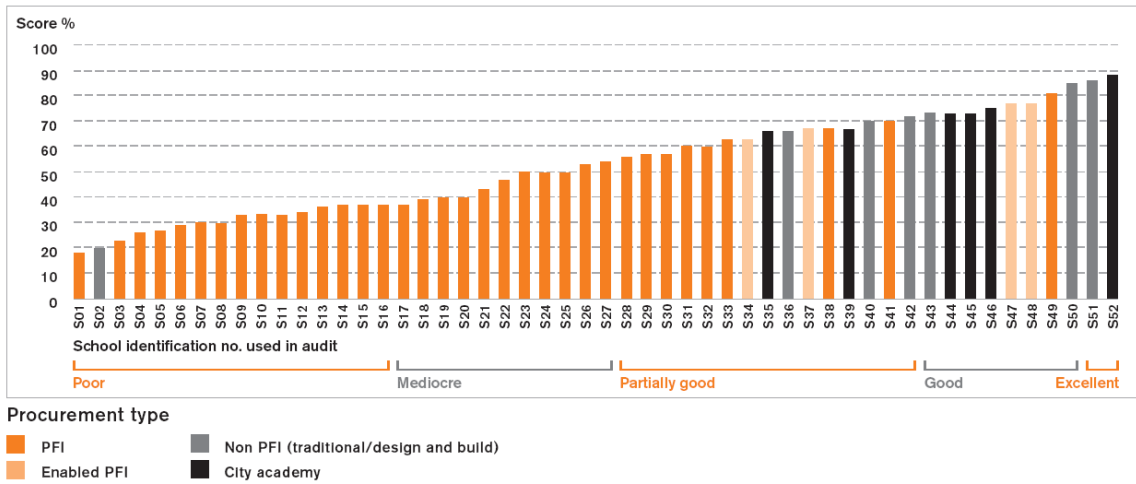Average % score for 52 schools visited

Figure 7: How did schools score on three key indicators?
% scores for functionality, build quality and impact for schools given full quality assessment

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Dr. Nuno Gil, Manchester Business School, The University of Manchester, prepared this case as the basis for class discussion. The case does not intend to serve as endorsement, source of primary data, or illustration of effective or ineffective handling of an administrative situation. Specific data, names, and situations in the case may have been intentionally altered.

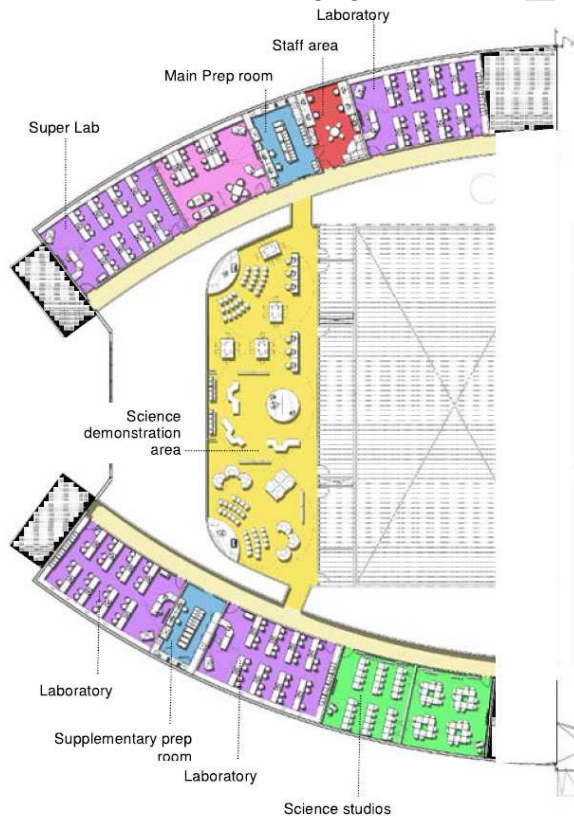**Exhibit 7 – Faraday report (2006). Exemplar designs**
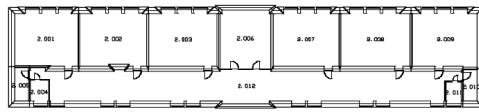
Above: original floor plan showing six classrooms
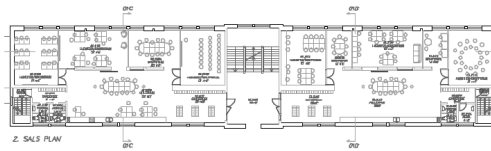
Above: new design showing two home areas

Original and Newly Refurbished Floor Plans at Maglegardsskolenschool, Denmark
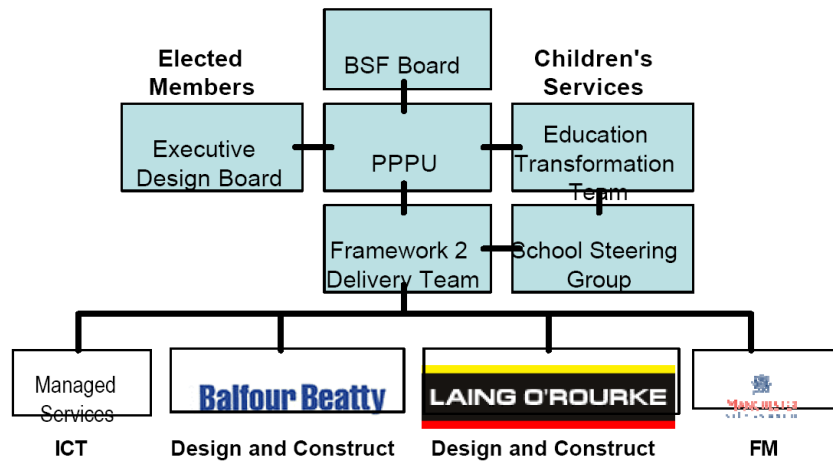

The Science Department Space Plan, East Barnet School, includes a reconfigurable 300sqm science demonstration area equipped with: interactive white boards and ceiling—mounted projector; phantom grids within floor finishes to mark alternative seating configurations; sets of carrels housing high-spec PC; flip-up tables along balustrade wall; laptop-enabled group snugs; movable (robot) benches; one super-lab; laboratories (equipped with mobile demonstration benches or self-contained mini-labs); and science studios appropriate for theory lessons.

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Exhibit 8 – Manchester Local Education Partnership

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