

**The Children's University: Creative Partnerships**  
**An evaluation**

John MacBeath and Joanne Waterhouse,  
with Jo Mylles, Jackie Ranger, Gary Holden and Carole Waugh

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## **Introduction**

The first Children's University was established in Birmingham in 1993 as part of a wave of initiatives in the city's education sector led by Tim Brighouse. The idea inspired similar developments throughout the United Kingdom and work has continued in differing forms and to varying extents at a number of sites. In recent years there has been a move to harness the initiatives to a National Executive, responsible for co-ordination and development. The Children's University (C.U.) is funded by the Department for Children, Schools and Families (DCSF) and the Sutton Trust. It is managed by a Chief Executive Officer (CEO) and a small support team and overseen by a group of Trustees who meet regularly to monitor and receive feedback from the CEO Ger Graus. The Chair of Trustees is the headteacher of St. John's College school in Cambridge – Kevin Jones. In Autumn 2007, the Trustees commissioned an evaluation of the work of the C.U. The evaluation is being conducted by John MacBeath and Joanne Waterhouse with researchers Jackie Ranger, Jo Myles and Carole Waugh. This paper is part of an interim report that contextualises the work of the C.U. and reports on the themes emerging from the initial stages of the evaluation. Each of the C.U. sites – some virtual, others closely connected to local authority offices and schools – is unique and characterised by a lack of regulation and constraint. They are all supported by creative alignment with a range of sources that sustain them such as funding streams, connections with local businesses and relationships with headteachers. These creative partnerships are frequently the result of energetic, inspirational and passionate leadership by C.U. managers.

## **The Children's University**

As it describes itself, the Children's University (CU) is a national organisation providing 7 to 14 year olds with 'exciting and innovative learning activities and experiences outside the normal school curriculum and outside normal school hours.'

The national CU celebrates achievement and rewards taking part. Raising children's aspirations is important to us and we aim to develop the understanding that learning can be the satellite navigation to better places in life!

How will that be done? The answer is after school, at weekends and in the holidays through an ever increasing family of local Children's Universities across the UK. Our different centres offer high quality learning in many forms, some of it more traditional and some of it perhaps unexpected: learning activities range from science, maths and the arts to horrible history, nature safari and space travel. Locally, our partners include universities, sports and dance clubs, museums, theatres and businesses. The national Children's University supports which ever approach will work best locally to bring benefits to children.

In the first year of the national CU, more than 25,000 7 to 14 year olds will have taken part in over 250,000 hours of learning activities – and this is just in England!

[\(http://www.thechildrensuniversity.com/\)](http://www.thechildrensuniversity.com/)

The need for an organisation such as the C.U. rests largely on evidence of the continuing gap between the highest and lowest achieving schools and between the highest and lowest achieving pupils. It is particularly acute in many of England's cities and was conceived of by Tim Brighouse in Birmingham where these issues proved an intractable challenge for local authority policy and school practice. Successive Pisa reports emanating from the OECD illustrate the persistent nature of the problem in virtually every country where school exists. The response has been to put more pressure on schools and on teachers, an intensification

process which has proved counter-productive in terms Tymms, 2004, MacBeath and Galton, 2008, Galton and MacBeath, forthcoming)

Four decades of school effectiveness research (Coleman et al., 1966, Rutter et al., 1979, Mortimore et al., 1988, Gray et al., 1999) have reached a very similar conclusion – the school effect is considerably less than the family, community and out-of-school effect. This points in one direction – the need to build better, more substantial bridges between multiple sites for learning. It is widely acknowledged that the issues have to be addressed more ambitiously and creatively if the achievement gap is to be reduced. Einstein is credited with saying, ‘problems cannot be solved by thinking within the framework in which they were created’.

‘Out of School Hours Learning’ or ‘study support’ has been shown to raise achievement, motivation and attendance (MacBeath et al., 2001). As that three year study showed, children and young people who brought with them the social capital of a rich and stimulating home life, classroom learning fed into and was fed by home ‘work’, home conversations, home support. Without opportunities for learning (or ‘valued’ learning) beyond the school, classroom experience is a contest of wills in which learning dissipates on exit from the schoolyard, so the gap between low and high achievers continues and actually widens as pupils progress through school (National Statistics, 2006). The old adage that schooling is a gap in your education holds true for some children and young people.

### **Back to basics: the where of learning**

Policy making around the world has tended to start from the ‘what’, with the ‘how’ as a secondary concern and the ‘where’ taken more or less as a given. In light of the persisting evidence of school failure and an increasingly rich body of knowledge about learning and teaching, reversing the order of these three questions may provide us with firmer ground for rethinking policy and practice. While policy makers are slowly beginning to understand the significance of learning beyond schooling, they are as yet unable to identify the levers of systemic change in the complex and messy area of non-institutionalised activity. However governments keep a watching brief on initiatives such as the Children’s University to see if they offer the potential for scaleable change.

### **Behaviour settings and construction sites**

The impetus for the establishment of a Children’s University came from the recognition of the inadequacy of schools for many children as the only site for learning, and an understanding that what and how we learn is significantly influenced by the place in which learning occurs (for example Weiss and Fine, 2000). While this is not news to socio-cultural theorists, constructivists or from work on distributed cognition, much of that research and theorising has actually taken place in classrooms. Research into ‘behaviour settings’ (Schoggen, 1989) reveals the extent to which differing sites both allow and constrain certain types of activity and certain kinds of learning, shaped to a large extent by three key dimensions – the physical, the social and the ‘expectational’. The latter is determined in large part by the first two but also contains implicit or explicit demands, rewards and sanctions. These may be so deeply embedded within the physical and social environment that they need no explicit sanction yet can be immensely powerful in determining behaviour, shaping attitudes and creating, or diminishing, intelligence (see for example Perkins, 1995).

The following three examples may be used to illustrate ways in which the physical, social and expectational environment work together to produce an orientation to learning. These three examples not only suggest why it is important to pay attention to *where* learning takes place but ways in which this impacts on the *how* and the *what*.

### **The lecture theatre.**

It is easy to predict how people, adults or children, will behave in the typical lecture theatre. In this highly structured environment there is little room for choice, individuality or expression of personality. Expectations of behaviour are both implicit by the physical and social geography of the room and (in the case of children) made explicit from the outset by someone who is accepted as an authority. The setting makes little allowance for social interaction and places a very high premium on sustained listening and viewing. For some this may be an inhibiting environment and ill-matched to their learning preferences or 'style'. For others it may be seen as comforting and safe, safe from a requirement to interact with others or to take the initiative in their own learning. For some children it may be a refuge from bullying or from being called on to expose one's inadequacy or lack of preparation.

The layout of many classrooms reflects some of essential characteristics of the lecture theatre and rests on many of the same premises about the nature of learning and teaching. However, the typical classroom is saturated with expectations from entry to exit. Sanctions and rewards are both implicit and passed on from generation to generation but are also made explicit from day 1 and reinforced virtually from moment to moment. Unlike the lecture theatre there is little space to hide and a much higher level of social and psychological risk. For some children and young people this is a congenial and exciting environment and they relish the challenge to move beyond their comfort zone into a new and rewarding world of knowledge. Others never come to terms with the classroom's insulation from the world they understand and the things that are important to them. For them classrooms can be a frustrating, alienating and sometimes even a frightening experience.

### **The inner city.**

Cities are also highly structured environments but with a wide diversity of opportunities to exercise choice and personal expression. While there are expected codes for behaviour on pavements, streets, open spaces, in shops, restaurants, banks or parks, the latitude for stepping outside of conventional norms is widely tolerated (entertainers, preachers, beggars, sellers and buyers) and urban spaces allow a range of individual and social groupings and a continuing ebb and flow among them. The only sanctions are legal ones and rewards are individual, lying within the nature of activities themselves. The city may be exciting and mysterious for some while for others it may be unsettling and threatening. For children from a rural background it may be both exciting and dangerous because of a lack of 'intelligence' as to the 'underlife' of the city and its traps for the innocent and unwary. Children who have grown up in the city are sometimes described as 'streetwise' because they are expert in negotiating its inner spaces, with a language a honed intelligence in dealing with and subverting authority. Research (Maguire et al., 2000) has shown London taxi drivers to have a larger hippocampus than the general population because in acquiring 'the knowledge', their intelligence grows. The researchers conclude 'It seems that there is a capacity for local plastic change in the structure of the healthy adult human brain in response to environmental demands' (p. 923).

Schools are often located in cities but not of them, insulated from the environment beyond, the high windows of Victorian architecture designed specifically to shield classrooms from the distracting world outside. Yet cities are immensely rich in the opportunities they offer for learning, and some schools have devised ways of using the city as a learning space. In its most radical form, the School without Walls in Philadelphia, the city **was** the classroom. Without a specific building to contain learning a structured programme was created to focus on learning gains in the various sites the city had to offer secondary age students. A short lived, but highly successful, replication of the school without walls in the mid seventies in Renfrewshire in Scotland demonstrated the extent to which an urban environment could be mined for learning opportunity. For eleven weeks in the summer term of 1972 thirty secondary 3 children in two Renfrewshire schools were freed from their classrooms and,

together with university researchers, devised their own individual timetables on the basis of what they wanted to learn in and around the city of Glasgow. Sites included The Royal Alexandra Infirmary, Glasgow University Observatory, the AA, St. Andrew's Ambulance Service, Calderpark Zoo, The Cattle Market, the car market, farms, the Scottish National Orchestra, the Royal Navy, Chrysler Car Factory, Robertson's Jam factory, auto repair workshops, Kelvingrove Museum taxidermy department, St. Arnot's Department Store and the School Meals Service (shocking revelations about food before Jamie Oliver!). Widely, and wrongly perceived, as a vocational programme, its primary benefit was in raising the self esteem, self efficacy and re-engagement with learning of young people who had been released from school because of their lack of 'ability'. Above all perhaps, this initiative demonstrated what there is to learn, the variety of ways in which it can be learned and where learning hides, waiting to be discovered.

### **The museum.**

Museum and art galleries are also highly structured behaviour settings as they invite a form of learning (or simply observing) by walking around. They make few demands, and sanctions in the shape of watchful custodians are implicit. Teaching is invitational, by reading labels, or perhaps with an explanatory headset or a personal guide. Exploring the environment may be undertaken entirely at one's own pace and preference, or as a social activity, discussing points of view with others, agreeing and disagreeing, sharing insights. In recent times museums have become more interactive, more hands-on, inviting playfulness, exploration and problem solving. Many schools routinely build in visits to museums sometimes with, and sometimes without, well designed learning intentions. More recently museums have taken the educational initiative in scaffolding educational experiences for visitors, sequencing and mapping a series of stimuli to provoke thought and active engagement. In Kelvingrove Museum in Glasgow, for example, a new initiative for children and young people offers educational programmes which build in problem-solving, self direction, social and personal skills through state-of-the art interactive technology. Children work in pairs with hand-held computers linked to monitors strategically placed at relevant exhibits throughout the museum. As children focus with renewed insight on a given exhibit they are posed with questions, a problem to solve or an artefact to recreate. Early evaluations show a very high level of engagement and increased self confidence for those who took part. As the programme develops the challenge is to sustain the enthusiasm, initiative and sense of self efficacy once children are back within the classroom environment.

We might add to the list of construction sites - the home, the church, the internet café, the community centre, the library, the residential centre and outdoor centre, all offering a specific kinds of physical, social and expectational settings. All have, in variety of ways, been used to extend children's experience, to enrich the curriculum and contribute to developing successful self confident learners. Many major airports have their own, often little publicised, educational programmes. Most of the major football clubs also have such programmes and the Government has made a major investment in the *Playing for Success* initiative for out-of-school-hours learning. Small, medium and large business have for years provided a range of opportunities for work experience, not simply for vocational purposes but as sites for developing communication, interpersonal and decision-making skills.

All of these settings illustrate, in differing ways, the significance of the 'where', and highlight some of the salient features of the environment that bear significantly on engagement, choice, self identity, ability, capacity and potential as a learner. Exploring the embedded features of these sites is important in giving is deeper insights into the nature and wellsprings of resistance and compliance, dependence and autonomy, and issues of control and motivation that loom so large in the lives of teachers. It is of critical importance for policy making in the future because going on doing more of the same or within the same parameters will not produce different results. As Nasim Taleb (2007: 73) has persuasively shown, 'We learn from

repetition at the expense of events that have not happened before'. He cites the following as exemplary of the dangers in relying too heavily on what may have seemed to serve us well in the past.

“But in all my experience, I have never been in any accident of any sort worth speaking about. I have seen but one vessel in distress in all my years at sea. I never saw a wreck and had never been wrecked nor was I in any predicament that threatened to end in disaster of any sort.”

(Captain E.J. Smith, 1907, RMS Titanic)

Perkins, whose empirical work confronts the problem of contextualisation and transfer of knowledge, distinguishes three types of knowledge which he terms ‘cholesterol knowledge’, ‘performance knowledge’ and knowledge ‘to go’. The first is the everyday survival knowledge which we exchange freely without any real deeper understanding, such as in discussions over good and bad cholesterol, what is ‘good for you’ or not. Much knowledge is at this level, received wisdom, and while necessary for simply the routine conduct of day-to-day living is a reminder of how little we actually understand and how much we do take for granted. The second, performance knowledge, is what schools excel in, that is the ability to reproduce or ‘perform’ knowledge at a given moment. This is akin to Freire’s concept of ‘banking’ – teachers deposit and withdraw knowledge from their pupils, although rarely with interest (in either sense).

The third category – knowledge ‘to go’ is the most problematic and fragile. What Perkins found was that good teachers could achieve a very high level of problem solving within the classroom with the appropriate structuring of the task, perhaps even evoking enthusiasm and enjoyment on the part of the pupils. However, when faced with an ‘open field’, an unstructured situation, the success rate fell dramatically. This he put down to three factors – first, an inability in children to spot the problem for themselves, secondly a motivation to want to solve the problem, thirdly a lack of knowledge as to what tools or strategies to deploy. This implies three key prerequisites for knowledge, or skill, transfer:

- a) an ability to spot the problem in an unstructured ‘field’
- b) a motivation to want to solve the problem
- c) a repertoire of tools and strategies appropriate to the problem in question.

As argued by A.N. Whitehead it is well-understood principles that transfer from one context to another.

In a sense knowledge shrinks as wisdom grows: for details are swallowed up in principles. The details of knowledge which are important will be picked up ad hoc in each avocation of life, and the habit of active utilisation of well understood principles is the final possession of wisdom.

(Whitehead, 1932)

How contextually bound knowledge acquisition, or creation, is and how effectively knowledge can travel to and from the classroom is one of the challenges faced by architects of the Children’s University, as well as the more fundamental issue of how well learning dispositions travel and how resilient they are when faced with adversity and failure.

Herein lies the challenge for the research team charged with evaluating the Children’s University over the next two to three years –dependent on continuing funding from the DCSF.

## **The evaluation**

The evaluation which began in the Michaelmas term 2007 was designed to serve a number of key purposes.

- To measure the success of CU against its own aspirations and objectives
- To report on the viability of the initiative as a whole and of individual centres
- To identify promising and breakthrough practice
- To identify areas for improvement
- To offer explanations for successes and failures
- To identify the most promising strategies for systemic improvement

Pursuing these purposes was seen as invaluable intelligence for policy makers at national and local authority level but even more importantly for the CU itself and for those it serves. In other words, it is essentially formative and of direct benefit to those involved.

Attending the first meeting of the centre managers we outlined the purposes of the evaluation and asked for volunteers from centres, attempting to keep the total number of centres studied to about ten, although we planned together survey data from all 20. The final 10 chosen were primarily chosen from the first to volunteer but then adjusted to give a more representative sample both geographically and in terms of their stage of development. The elements of the evaluation comprise the following:

### ***The vision***

The nature of the vision and aspirations for the CU of its key architects, how that vision is realised, shared and owned by those with responsibility for making it happen has been documented from the outset, so that we can chart ways in which that vision moves, changes, enriches or assumes new forms. We plan to collect the following kinds of data:

### ***The nature and quality of centres' provision***

- Profiles of centres, nature of provision and resourcing
- Clientele, targeting and support strategies
- Outreach activities, publicity and marketing
- Staffing
- Mentoring provision: experience and expertise of mentors
- Costs and cost-benefit analysis
- Data (and uses of data) on CU attainment, value-added, attendance, and any other pupil relevant data held by centre
- Nature of partnerships with schools and other agencies

### ***Individual pupil dispositions and achievement***

- Quantitative data at individual pupil level on attainment, attitudes and attendance
- Exemplars of progression in quality of students' activity and work produced
- In-depth 'life story' data from young people through interview
- Pupils' views and the value they place on certification and other forms of learning
- Observations of pupils in different contexts, responding to tasks, dealing with challenges, with follow up discussion

### ***Tutors and mentors***

- Profiles of tutors'/mentors' experience and expertise
- Tutor attitudinal data – aspiration, satisfaction and challenges
- Tutor evaluation of current provision and effectiveness –strengths, weaknesses, areas for development

#### ***School perspectives on CU activities and links***

- Nature of school knowledge of, and links with, local centres
- School perspectives on CU provision and activities as relevant
- Teachers' views of in-school/in-classroom attitudes and achievements of young people involved in CU activities

#### ***Agency and mentoring perspectives on CU provision and activities***

- Knowledge of, and attitudes to, CU of partnership agencies
- Views of mentors: successes and challenges

#### ***Local authority support***

- Local authority policy and documentation
- Nature of LA support
- LA views on effectiveness of provision

#### ***National level***

- Views of DCFS/HMI/Ofsted where relevant on effectiveness of CU provision and impact

This evaluation mirrors in many respects the National Evaluation of Study Support (MacBeath et al., 2001) which gathered a similar body of statistical data together with case studies of individual centres. It was able to demonstrate value added in respect of the three 'A's – attainment, attitudes and attendance. It was also able to pinpoint the range, variations and viability of 'centres' and the nature of provision most likely to vouchsafe success. Similar disaggregation used in that study would also be significant here.

### **Outcomes**

We anticipate interim and end of year reports providing:

- a) Illuminative case studies of Centres' work and progress
- b) Examples of innovative work with young people and indicators of success
- c) Cross-centre data on achievement, attitudes, attendance of young people and co-ordinators' and tutors' assessment of achievement
- d) Possible revisions to the Code of Practice for Out of School Hours Learning (OSHL) and exemplification of its various uses
- e) Evaluation of sustainability and viability of centres and indicators of best practice
- f) Implications for policy makers and Centre Managers and for schools

### **The what and the how**

The 'where' of CU activities encompasses an imaginative range from schools, to universities, community centres, residential centres and essentially anywhere where children are and are

deemed to be intellectually and emotionally engaged. For the research team the ‘what’ and the ‘how’ become the focus of interest.

The nature of activities among the centres covers a wide range constrained only by the imagination of local organisers and the scope for children to express their interest and to share responsibility for making it happen. Programmes of activity include keyboards, cooking, knitting, drama, rock music and a host of tutored modules leading to CU certification, for example:

- The body and medicines
- Energy and the environment
- Ancient Egypt
- The earth and beyond
- Micro organisms
- The Brain and the Senses
- Life Fitness
- Fuel and Energy
- Aspirations and Ambitions
- ‘There’s more to life than me’
- You can change the World

These sessions take place at every possible interstice before or after school, such as Supersaturdays, residential sites, outdoor centres and, for example, Space Camp at the University of Bradford. In principle the ‘how’ of learning is much less prescribed and teacher led than spontaneous and student-centred although as we have observed in some sites after school activities are sometimes an extension of classroom pedagogy with the important difference that children have chosen to be there and continue to attend by virtue of the skills of the teacher or visiting expert.

Children who attend get credits leading to graduation which can take the form of a full begowned occasion, with ceremonial awards celebrating skills and knowledge achieved and certificated. In the final section below, we outline the issues emerging from the initial stages of the evaluation.

## **Emerging Issues**

### **Passionate Leadership**

The centre managers demonstrate a passion for the job that finds expression in creative forms of structuring for the service provision for young people and resourcefulness. There are examples of successful bids for various, ever-changing sources of funding and entrepreneurial out-reach work to local businesses, councillors and politicians all on behalf of the young people. These leaders are innovative, thoughtful and sometimes evangelical about the work. They can articulate a vision and explain the connectedness between the different services that their site provides. Centre managers who operate well strategically are informed about national and local policy initiatives and approach development with a responsive and flexible attitude.

The governance and setting for leadership is varied. Some centre managers work for the local authority, some are employed solely to work for the Children’s University and one is in the process of becoming the chief executive of a limited company, governed by a Board of Trustees.

The challenge of such forms of leadership is to develop systems for sustainability. Some centre managers are very experienced and knowledgeable about their particular setting. They have been associated with the development over time and been instrumental in shaping the structures and culture. They have recruited the tutors, mentors and administrative support. They are often, by necessity, the sole full time worker, and, by definition, the most informed individual. In such circumstances, it is important that strategies can be developed to ensure that the work will endure in the event of the centre manager leaving.

### **Structurally unique**

Each site is unique. The Children's University as it exists currently in each location has developed in response to the particular influences wrought by peculiarities of governance, locality, national initiatives, school involvement and the creative force of the centre manager. Many of the modules for tuition, for example, are structured and organised in accordance with the understanding of the leading adults at that site. Alignment with higher education institutions, businesses and local authorities all vary in degree and help to shape provision accordingly. The nature of the Children's University provision – often voluntary, additional to statutory provision, in the 'free time' of young people – leads to formulations that reflect the particular needs of the locality and the community. Many sites have branding and an identity that reflects pride in the locality.

### **Networking for Sustainability**

Each Children's University setting being studied is 'nested' within a complex system of relationships. These are primarily connected by the centre manager and are with a range of individuals and institutions. Sometimes these are strengthened by the connection with past employees who have moved to other, related occupations and continue to encourage, support and provide inspiration. Relationships with headteachers and schools is enduring. Headteachers who have been interviewed demonstrate a commitment and loyalty to the principles and the provision. Centre managers have stories to recount of entrepreneurial activities that have seen them forging useful alliances with business leaders and politicians. One businessman interviewed reflected on the value of his involvement with the Children's University, both to him personally and to his company.

### **Bespoke Accountability**

All centre managers are aware of the need for quality assurance and there are various forms and degrees of practice. There are examples of rigorous procedures for observations, feedback and accountability.

Headteachers demonstrate a long-term commitment to involvement and confidence in the value for children, families and schools. They can cite examples of how attending courses provided by the local Children's University has significantly improved community relations and the school's work with families. In particular, a focus on family learning at one site has been identified by various adults as effective in encouraging families into learning centres and promoting cohesion. There are accounts of ways in which individual children's attitudes have been reformed and transformed. Young people on the brink of criminality have been observed re-engaging with schools and their schooling.

We have begun to reflect on possible ways for capturing the value and impact, in addition to seeking quantitative data sets. Perhaps collecting vivid accounts of children's stories and evaluating the work in line with the criteria for the Every Child Matters policy initiative would help capture the particular value of Children's University provision and correspond to current concerns.

It is in the nature of provision unrestrained by regulation and characterised by dynamic, passionate leadership that there is scope for the development of a range of partnerships. The C.U. sites that are being closely studied for this evaluation are all examples of work resulting from networks of support and relationships that have been established over time and that are situated in a particular locality. It is particularly interesting to hear testimony from committed professionals who consider themselves largely unfettered by the constraints bearing down on schools. We continue to learn how creative partnerships can sustain and ensure the ongoing development of The Children's University.

## References

Gray, J., Hopkins, D., Reynolds, D., Wilcox, B., Farrell, S. and Jesson D. (1999) *Improving Schools: Performance and Potential*, Buckingham: Open University Press.

MacBeath, J., Kirwan, T., Myers, K., McCall, J., Smith, I. and McKay, E. with Sharp, C., Bhabra, S., Weindling, D. and Pocklington, K. (2001). *The Impact of Study Support: a Report of a Longitudinal Study into the Impact of Participation in Out-of-school Hours Learning on the Academic Attainment, Attitudes and School Attendance of Secondary School Students* (DfES Research Report 273). London: DfES.

MacBeath, J. and Galton, M. (2008) *Pressure and Professionalism*, London: National Union of Teachers.

Galton, M. and MacBeath, J. (forthcoming) *Teachers under pressure*, London: Routledge.

Maguire, E. A., Gadian, D.G., Johnsrude, I.S., Good, C.D., Ashburner, J., Frackowiak, R.S.J. and Frackowiak, C.D. (2000) Navigation-related structural change in the hippocampi of taxi drivers, *Psychology*, 97, (8), 4398 – 4403.

Mortimore, P., Sammons, P., Stoll, L., Lewis, D. and Ecob, R. (1988) *School Matters: The Junior Years*. Somerset, Open Books and Berkeley, CA, University of California Press. (Reprinted in 1994 by Paul Chapman, London).

Perkins, D. (1995) *Outsmarting I.Q: the emerging science of learnable intelligence*, New York: The Free Press.

Rutter, M., Maughan, B., Mortimore, P. and Ouston, J. (1979) *Fifteen Thousand Hours: Secondary Schools and Their Effects on Children*, London: Open Books.

Sammons, P., Hillman, J. and Mortimore, P. (1994) *Key Characteristics of Effective Schools: A Review of school Effectiveness Research*, London: Office of Standards in Education.

Schoggen, R.G. (1989) *Behaviour Settings*, Stanford, California: Stanford University Press.

Tymms, P. (2004) Are Standards Rising in English Primary Schools? *British Educational Research Journal*, 30, (4), 477- 494.

Weiss, L. and Fine, M. (2000) *Construction Sites: Excavating Race, Class and Gender among Urban Youth*, New York: Teachers' College Press.

Whitehead, A.N. (1932) *The Aims of Education and Other Essays*, London: Williams and Norgate.

