
REPORT

CAN CHANGING ASPIRATIONS AND ATTITUDES IMPACT ON EDUCATIONAL ATTAINMENT? A REVIEW OF INTERVENTIONS

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A review of the evidence on whether educational attainment can be raised by focusing interventions on changing attitudes of parents and children.

Previous policy has called for attitude change including raising aspirations, but this has led to initiatives set up largely without looking at evidence of impact. With reduced public funds available and the danger of encouraging negative perceptions of individuals and communities, should policy and practice focus on attitudes or on other directions?

The report:

- evaluates research evidence from five groups of interventions with children and parents: parent involvement, extra-curricular activities, mentoring, volunteering and peer education, and interventions with a primary focus on changing attitudes;
- analyses whether change in any of three attitudes – aspirations, locus of control and valuing school – leads to an impact on educational attainment;
- finds no evidence that impact on attainment is mediated by change in any of these attitudes; and
- argues for a shift in emphasis from 'raising aspirations' to 'keeping aspirations on track'.

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EXECUTIVE SUMMARY

This review set out to establish whether there were interventions that could be scaled up to address the attainment gap for socio-economically disadvantaged children and young people by changing a particular set of attitudes. These attitudes were the aspirations to do well at school and to aim for advanced education, the sense that one's own actions can change one's life, and the giving of value to schooling and school results, referred to as aspirations, locus of control and valuing school.

Attitude change, especially raising aspirations, has been a focus of policy in education for many years. However, what has been missing is any evidence that the recommended initiatives actually lead to the outcomes assumed by the policy. It was therefore important that this review should investigate intervention evaluations that looked at change in at least one of these attitudes and in some aspect of educational attainment. In this way, we could look at whether there were interventions that impacted on attainment via a change in attitudes. We sought to identify the best evidence to achieve this task.

By searching academic journal databases and the websites of many organisations, and by asking the advice of academics, practitioners and young people, we selected for detailed analysis more than 60 research papers, of which just fewer than 30 were evaluations of particular interventions. These papers related to five intervention areas: parent involvement, mentoring, extra-curricular activities, volunteering and peer education, and interventions with a primary focus on attitude change. We also looked at the economic value of scaling up promising interventions, and explored a wider literature on what might need to change in the set of three attitudes in order to influence educational attainment, and the place of different actions and provisions in bringing this about.

Six key findings emerged about the chain of impact of interventions from attitudes to attainment.

- We found evidence of impact – albeit small, although even very small effect sizes can have important educational effects – on the set of three attitudes and, in the same interventions, evidence of impact on different kinds of attainment. Statistically significant effect sizes for educational attainment and attitudes were found for:
 - parent intervention (attainment 0.17–0.45 and attitudes 0.24–0.66);
 - mentoring (0.09–0.22 and 0.11–0.24); and
 - extra-curricular activities (0.032–0.092 and 0.043–0.155).
- Even where evaluations could demonstrate an impact on both attainment and one or more of the set of three attitudes, there was no evidence to suggest that the impact on attainment was mediated by changes in any of these attitudes.
- Promising interventions were in the areas of parent involvement, mentoring, extra-curricular activities, and peer education, where there was evidence of impact both on attitudes and on educational attainment. However, it was not clear that educational attainment was mediated by impact on attitudes. It seemed that these interventions were more likely to impact on behaviours, with a more direct link to attainment. It may be better to focus on changing actions or behaviours rather than attitudes.
- Despite limited information from evaluations, a cost–benefit analysis found evidence of value for money in the areas of parent involvement, academic extra-curricular activities and mentoring. However, the impact evidence found on the interventions was not sufficient rationale to take any to scale on the basis that they would improve attainment via the mechanism of a change in aspirations, locus of control or valuing school.
- Our research reinforced the insight that children and parents from low-income families have high aspirations and value school, and that parents by and large try their best to support their children’s education. There is evidence that teachers and other professionals may underestimate the aspirations of socio–economically disadvantaged children and parents and not appreciate the importance with which school is viewed.
- The standard of evaluation was generally poor. We found few examples of adequate control mechanisms and/or satisfactory statistical techniques. In addition, the instruments used for measuring aspirations, locus of control, and valuing school were relatively unsophisticated and it was far from clear what exactly they were measuring. We also found few examples of sophisticated qualitative research; there was therefore little detail about the context in which change was achieved, yet it is such detail that seems to be important in considering how to bring about change.

There is no easy solution to closing the attainment gap for poorer children by focusing on change in aspirations, locus of control and valuing school. The widespread emphasis on raising aspirations, in particular, does not seem to be a good foundation for policy or practice. Indeed, there were almost no studies that tried to test the hypothesis that attitude change leads to impact on attainment, in spite of its widespread acceptance. There was just as much reason to expect that the causation runs in the opposite direction – that is, from increased attainment to improved aspirations, locus of control or valuing school. We came to the view that a change is needed in how we think about addressing attitudes if the aim is raising educational attainment. From our evidence, this change involves the following factors.

Keep attitudes on track

The focus on aspirations, locus of control and valuing school should be more about keeping them on track over time through a range of different interventions. Aspirations may be unrealistic in terms of the opportunities available, so the focus might be on improving opportunities and information rather than changing attitudes per se. Children and parents have views on what will help achieve their ambitions. Parents have ambitious aims for their children, give importance to school and do what they can to support them. Teachers and other professionals may need to revise upwards their estimation of the aspirations of parents and children. There is evidence that schools can do more to engage with parents on parents' own terms.

Focus on learning

Interventions that deal more directly with learning within the curriculum might be more promising. This includes academically focused extra-curricular activities, mentoring and parent encouragement of child learning. Such interventions had more impact on educational attainment and also had a more convincing case in terms of economic costs and benefits. We were mindful that many aspects of schooling were omitted from this review due to the need for evaluations to provide clear evidence of change. Similarly excluded were other interventions that might affect attitudes, such as parenting programmes and ways to improve children's active participation in school, to give just two examples. These, and many others, may indeed help to keep attitudes and aspirations on track.

Improve information and opportunities

Promising interventions appeared to involve the provision of information (about effective home learning techniques for parents, about what higher education actually involves, or about one's own progress though better academic mentoring, for example) or improved opportunities for learning (in academically related clubs, through skills developed within peer education, or about how to support one's child at school, for example). These interventions may improve attainment directly by changing behaviours (such as parents spending more time talking to their children attending school) or they may work indirectly by affecting attitudes. Further research in parent involvement interventions might be advised to look at the merits of a direct focus on actions vs a more indirect focus on attitude change. Also of use would be research that addresses how initial high aspirations adapt to constrained opportunities in the dynamic between parents, pupils and teachers.

Area-based multi-strand interventions offer promise

Background research into aspirations suggests that young people's aspirations are complex and changing, and that young people need a range of support to stay on track or to re-engage, or to know how to foster and bring their aspirations to fruition. However, what it takes to progress, and the role of ambition and self-efficacy in this, is not well understood. A promising line of research would be to investigate the effectiveness of different combinations of interventions (and the role of offering them through area-based multi-strand

initiatives) for maintaining and re-instating aspirations. An alternative model to explore is a more ecological approach; i.e. the way embedded supportive relationships in normal practice may help to bring about raised expectations at school (questioning the stereotypes of socio-economically disadvantaged young people and communities).

Evaluations need more detail on the operation and costs of interventions

Future evaluation of interventions should include more detail to assist the generation of cost–benefit analyses. The inclusion of better data on the inputs and/or associated costs, both direct and indirect, is recommended. More rigorous quantification of impact is also needed in order to assign a value to benefits.

To explore attitudes we need more sophisticated research tools

There is a need for more detailed and sophisticated research tools to consider aspirations, locus of control and valuing school. At the moment there is either no measure (valuing school) or only measures that vary widely in quality (aspirations and locus of control) or in how they define attitudes. Most current tools equate the possession of an attitude to responses to a small number – often one or two – of closed questions. Where methods are used in research that record attitudes, they should record the ways attitudes are experienced and articulated by children and parents, using detailed approaches over time, rather than relying on questionnaire responses to pre-prepared questions. More appropriate detailed research tools need to be developed in this area, as well as means for exploring attitudes other than by simplistic measures. Related to this, interventions should have articulated robust theories of change or logic models so that appropriate methodologies, and suitable instruments, can be developed to measure them.

Avoid individual blame for the effects of poverty

There is a danger that a focus on attitudes encourages the idea that the attainment gap for socio-economically disadvantaged children is largely a result of individual blame. Any focus on attitudes, which is about individual change, should therefore be considered as part of wider structural changes needed to address the effects of poverty.

1 INTRODUCTION, BACKGROUND AND METHODOLOGY

The evidence from the UK and elsewhere is that children growing up in lower income families tend to emerge from school with substantially lower levels of educational attainment than their more advantaged peers. This is a major contributing factor to patterns of restricted social mobility and the inter-generational transmission of poverty. There is therefore great interest in finding ways of intervening to change this pattern of lower attainment. What is lacking is evidence about the complex mechanisms by which affluence and disadvantage in children's backgrounds are translated into educational outcomes.

The report is organised into three sections. The first presents the background to the review and the methodology that guided it. The second looks at how far it is possible to work along the chain of evidence that interventions lead to attitude change (in children and/or parents) which then leads to attainment change for poorer children. A number of interventions that are aimed at parents and children or young people are considered, divided into five groups. Subsections define each intervention and explain any notable inclusions or exclusions in the review. Enough details are provided to draw conclusions about whether the intervention should be pursued, including a table of any available effect sizes. An economic estimation is made of whether the intervention provides value for money. The third section looks at possible explanations for the review findings in order to arrive at recommendations for practitioners, policy-makers and researchers. This involves looking at the quality of the evaluations of interventions. The process of arriving at recommendations also

involves a consideration of research contextualising the particular attitudes that are the focus of this review – in other words, looking to some degree at how they are conceptualised. The detailed synthesis of evidence from interventions in the five groups is placed in the context of a wider literature exploring what might need to change in aspirations, locus of control and valuing school in order to influence educational attainment, and the place of different actions and provisions to bring this about.

This review is accompanied by a Technical Report (available from <http://www.ncl.ac.uk/cflat/JRFInterventionsReviewTechnical>) that gives details of the methodology, the consultation with young people, the cost–benefit analyses, and a table of many of the papers consulted from which decisions were made as to which to include in this review.

Background

This review arose from ongoing interest among policy-makers, practitioners and researchers in the attainment gap between richer and poorer children, but was particularly prompted by the work of Goodman and Gregg (2010). Their report brought together the findings of research using four large data-sets: the Millennium Cohort Study, the Avon Longitudinal study of Parents and Children, the Longitudinal Study of Young People in England and the children of the British Cohort Study. Associations between educational attainment, socio-economic position and a range of ‘aspirations, attitudes and behaviours’ were analysed statistically. The intention was to find ‘the routes through which [socio-economic position] affects educational attainment’ (Goodman and Gregg, 2010). The model that underpinned the authors’ conception of the issue may be simplified (see Figure 1).

The results of their analyses led them to conclude that there is some evidence for certain attitudes, aspirations and behaviours mediating the effects of poverty and affluence. Furthermore they proposed that intervening to change certain behaviours and beliefs of parents and children ‘may make a contribution to reducing educational inequalities’ (Goodman and Gregg, 2010).

Yet these interesting findings beg further questions. As the authors highlight, their findings of statistical associations are not the same as causality. In addition to examining these relationships for evidence of causation, it is necessary to investigate whether these proposed mediating factors can in fact be changed and whether making these changes produces improvements in the educational attainment of poorer children. In essence, the suggested chain of impact (see Figure 2) requires study.

Figure 1 – Simplified version of the model linking parental socio-economic position, attitudes, beliefs and behaviours, and child outcomes

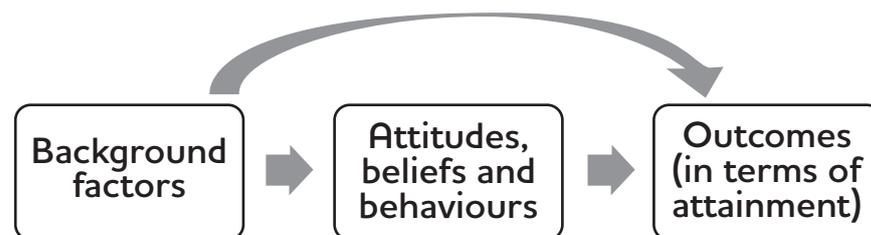


Figure 2 – Chain of impact of interventions on attainment through changing attitudes, beliefs and behaviours



The Joseph Rowntree Foundation commissioned two reviews: one charged with looking for evidence of causality (Gorard, *et al.*, 2012) and the other – this review – with examining relevant interventions for evidence of success in changing attitudes leading to gains in attainment. The suggestions of Goodman and Gregg (2010) regarding areas where intervention was likely to succeed in these terms were returned to. The attitudes to which they had referred were understood to be centred on educational aspirations, locus of control and valuing school. The focus of the review was not therefore on attitudes and outcomes generally, but on three particular attitudes, and one area of outcome: that of educational attainment. It was these relationships that seemed from Goodman and Gregg to be among the most promising. Other attitudes and behaviours were also seen as promising in their association with attainment, but were excluded from this review.

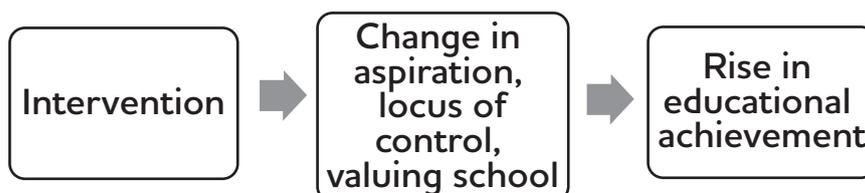
Thus, this study looks for evidence of the chain of impact (see Figure 3), to see whether attitudes can be changed and whether such changes raise attainment. This is the overall model used to conduct this research review.

The review question was: What are effective ways of intervening in aspirations and attitudes of children and parents in order to impact on educational outcomes to the benefit of socio-economically disadvantaged children?

The attitudes of interest were defined by the Joseph Rowntree Foundation as follows:

- educational aspirations – the aspiration on the part of children and their parents for the child to do well educationally, to participate in advanced education, and so to enhance their job and career prospects;
- locus of control – the belief on the part of children and their parents that their own actions can change their lives; and
- valuing of school – the sense on the part of children and their parents that school and school results are important in life.

Figure 3 – Chain of impact of interventions on attitudes and attainments being assessed by this review



Methodology

This review is a *form of best-evidence synthesis* (Slavin, 1986) across a range of methodological paradigms from education, health and the social sciences. Studies were selected that were evaluations of interventions with young people or parents, that demonstrated relevance to a context of economic disadvantage, and that measured impacts on aspirations, locus of control, valuing school and educational attainment. Where possible we have included information about the effect sizes of interventions. We chose this measure because it has a direct implication for policy by identifying in a standardised way how much impact a given intervention is likely to have on children or parents. Effect sizes are combined with other available quantitative and qualitative data from evaluation studies, and information from the wider research literature in all the different intervention areas. An iterative process was used (explained fully in the Technical Report) that involved:

- searches, over the course of the review, of academic journal databases;
- internet searches of many organisations and directly for interventions;
- direct consultation with a range of informants – academic and practitioner – to select intervention areas and individual evaluation reports;
- consultation with young people through Investing in Children agenda days;
- a seminar presentation of preliminary findings with practitioner, academic and young person representatives;
- two project advisory group meetings;
- information from organisations provided to the review through the Joseph Rowntree Foundation; and
- papers from the related causality project.

Several hundred intervention reports, accessed from the various search strategies, were read. Intervention evaluation reports were included in the review if they satisfied all of the following criteria:

- had a focus on disadvantage;
- reported an intervention study;
- considered data about the impact on (at least one of) the set of three attitudes; and
- considered data on the impact on educational attainment.

We selected for detailed analysis more than 60 research papers, of which just fewer than 30 were evaluations of particular interventions. Many of the other papers were reviews of evaluations.

This was not a systematic review as usually defined, although we were systematic in our search methods. The breadth of research literatures that were consulted to answer the review question and the lack of interventions that met the review criteria led us to a more purposive approach to tracking down appropriate studies and the need to trawl a range of different sources.

Interventions that did not explicitly focus on disadvantage were included as long as there was no reason to think that they would be inappropriate for those who were socio-economically disadvantaged. Interventions were only included if they considered data on both attitudes and educational attainment. Although we were interested in looking at interventions that did not directly set out to influence the particular attitudes in question, we required evidence that an attitude had changed and therefore some kind of measurement of the attitude in the evaluation was needed. There was little to be gained from finding studies that showed that attitudes could be changed if they did not also look

at attainment, as we would have no further knowledge about whether such a change could contribute to closing the attainment gap. Similarly, interventions that only considered impact on educational attainment without also looking at impact on attitudes would add little to evidence about whether attainment change is mediated by attitude change. The term 'educational attainment' is used since it refers to a range of school outcomes, not just those measured by a test. Many more intervention reports were read than are included in this review, and a more comprehensive table of many of the papers analysed is found in the Technical Report. Differential relevance of effects on gender and ethnicity were also noted.

An intervention was defined as something not usually provided, that is time-limited or short term, though it may make use of usual staff. Studies of schooling and of the process of teaching and learning were excluded as this was a review of interventions that make deliberate efforts to bring about changes that are additional to what normally happens in the class or the school. While all aspects of schooling would seem likely to involve attitudes in some way, there were few studies in this wide area that met our inclusion criteria.

Only very few reports on interventions explicitly measured educational attainment and either aspirations, locus of control or valuing school. We therefore decided to broaden the definition of the attitudes and outcomes in which we were interested in order to admit into the review a wider range of studies. So, for instance, 'self-efficacy' was assumed to be synonymous with 'locus of control' for the purposes of this review. A parent's involvement in and encouragement of the child's learning, development and education either at home or in the school was defined to be synonymous with the parental attitude of valuing school. A range of preschool child outcomes was accepted as part of educational attainment.

The lack of evaluations that met the review criteria led to decisions to accept reports that could help to answer the review question. This included looking at interventions that impacted directly on attitudes, even where the attitudes were not one of our set of three, as long as impact on educational attainment was also considered. It also included seeking research that was not about interventions but that described and quantified the set of three attitudes among children and parents. Background research to do with the conceptualisation of children's and parents' aspirations, locus of control or valuing school was included in the review to contextualise the review to the degree that seemed appropriate.

Multi-strand interventions or large-scale policy changes were not considered in the main review analysis in Chapter 2 since their lack of detailed data on the set of three attitudes and on attainment did not provide a basis for any confidence about the effect of such interventions/policies on changing attitudes or attainment. However, this does not automatically mean that the more tightly focused programmes, which may be easier to evaluate, necessarily offer more powerful ways of changing attitudes, aspirations and outcomes. Evidence from such multi-strand interventions was part of this review but is considered in the discussion in the final chapter.

Where possible, we have reported the effect size where it is statistically significant. The effect size provides a way of comparing impacts independently of the scale used for measurement. Most of the effect sizes reported in this review would be considered small by some standards (Cohen, 1969); that is, less than 0.5. However, as Coe (2002) argues, even small effect sizes can have important educational effects. For example, an intervention with an effect size of 0.2 could raise the proportion of GCSE grades A* to C from 50 per cent to 58 per cent. Further explanation of our use of effect sizes and statistical significance is found in the Technical Report.

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The review looked for interventions that were either effective, promising or had no evidence, as defined below.

- Effective interventions: those with robust evaluation methodologies (qualitative, quantitative or mixed) that provided convincing evidence of impact both on attitudes and on educational attainment. In addition, there had to be evidence of the direction of influence, in that educational attainment was mediated by impact on attitudes for an intervention to be regarded as effective.
- Promising interventions: those with evaluation methodologies that *may* be lacking in some area of methodological quality, but for which there was evidence of impact both on attitudes and on educational attainment. Evidence of the direction of influence *may* be lacking. In other words, it may not be clear that educational attainment was mediated by impact on attitudes.
- Interventions which had no evidence: those which looked at evidence of change in both attitudes and educational attainment and for which there was evidence of impact *either* on attitudes *or* on educational attainment, but not on both.

The findings from each intervention group were used to give an estimate of the economic costs and benefits of effective or promising interventions, in an approximate cost–benefit analysis. This was approximate since robust information on the impacts and inputs of the variety of interventions reviewed was not always available. We have shown the benefits that could accrue from different kinds of changes in attainment and suggested the measures that future research might need to include should a cost–benefit analysis be carried out. Further explanation of the cost–benefit analyses is found in the Technical Report.

This review has included interventions from outside the UK, most often from the US, while recognising that interventions will not necessarily transfer across national context either in their applicability, deliverability or effect size. Issues of transferability will be returned to if non-UK-based interventions are found to be effective.

2 THE INTERVENTIONS

The evidence from interventions reviewed in this study has been summarised to define each intervention group, list the individual interventions and associated studies that were reviewed and give an overall synopsis of evidence (see Table 1).

In the pages beyond the synopsis table, each intervention group is considered separately. In these sections, the evidence on each intervention is presented together with other relevant research. It was not possible, due to lack of information, to rate interventions on the level of robustness of findings. However, comments are made in each section relating to the quality of the research.

We have not included interventions for which there was no relevant research. The remaining groups presented here are:

- interventions with parents;
- extra-curricular activities;
- mentoring;
- volunteering and peer education; and
- interventions with a primary focus on changing attitudes.

In each intervention group we look at how the area is defined; studies included and excluded; the appropriateness of the intervention for and impact on socio-economically disadvantaged young people; impact on ethnicity and gender; impact on aspirations, locus of control, valuing school and educational attainment, including effect sizes where they could be calculated; and costs and benefits. The structure of each section is similar but also varies with the nature of the evidence available. Aspirations, locus of control and valuing school are sometimes referred to as 'the set of three attitudes'.

Table 1 – Intervention groups showing definition and scope, the literature reviewed and summary findings

Search area	Definition and scope	Interventions and reviews	Summary of findings
Interventions with parents	Interventions to encourage the involvement of parents in children's at-home learning and development or in parent involvement in education and schools.	<p>Parent involvement interventions considering the impact on self-efficacy/ locus of control and child outcomes:</p> <ul style="list-style-type: none"> • Home Instruction for Parents of Preschool Youngsters (HIPPY) (Nievar, <i>et al.</i>, 2011) • Hands-On Parent Empowerment (HOPE) Program (Leung, <i>et al.</i>, 2011) • Head Start Transition Demonstration project (Seefeldt, <i>et al.</i>, 1999; Ramey, <i>et al.</i>, 2000) 	There is no evidence that a change in child attainment is mediated by a change in the parent's attitudes of aspirations, locus of control or valuing school. There is some indication that attainment change may be mediated by a change in the actions associated with helping child development and learning at home. Most estimated effect sizes for attainment are 0.13–0.35, with 0.8 from one study for teacher-assessed support from family. Information is lacking in most of the interventions for calculating effect sizes for attitudes.
	Interventions aimed to improve at-home parenting to facilitate learning; involve parents in schools; involve parents in their children's and their own learning.	<p>Parent interventions considering the impact on parent involvement with their child in learning:</p> <ul style="list-style-type: none"> • The Houston Parent-Child Development Center project (Johnson, 1990) • The Parents as Teachers programme and Parents as First Teachers (Pfannenstiel and Zigler, 2007; Parents as Teachers National Centre, 2008) • Tandem: a Sure Start initiative for enhancing the role of parents in children's early education (Ford, <i>et al.</i>, 2003) • Families and Schools Together (McDonald, <i>et al.</i>, 2006; Ternion, 2006; Kratochuill, <i>et al.</i>, 2009; Crozier, <i>et al.</i>, 2010; Save the Children, 2010) • Home–School Knowledge Exchange (HSKE) project, part of the Economic and Social Research Council's Teaching and Learning Research Programme (Hughes, 2006; Hughes and Pollard, 2006) • Parent leadership in school–community collaborations (Warren, <i>et al.</i>, 2009) • Engaging Parents in Raising Achievement project (Harris and Goodall, 2007) • The Family Literacy Initiative (Brooks, <i>et al.</i>, 1997) 	<p>In two interventions, effect size estimates were found for self-efficacy of 0.24–0.66, and for child attainment of 0.17–0.46. However, the evaluation design and the complexity of the interventions does not make it possible to conclude that changes in attainment had come about as a result of changes in self-efficacy.</p> <p>Interventions varied considerably in content, had generally high drop-out rates, rarely considered ethnicity, and worked predominantly with mothers. Most focused on socio-economically disadvantaged parents, though this was not clearly defined. Many parent evaluations did not measure attitudes directly but tended to measure behaviour, which can be interpreted as reflecting attitudes. Where relevant attitudes were measured, the focus was parental self-efficacy (locus of control).</p>
			The value of the outcomes relative to the estimated costs suggests that interventions for parents could provide good value for money.

(continued overleaf)

Table 1 continued

Search area	Definition and scope	Interventions and reviews	Summary of findings
Interventions with children – extra-curricular activities	<p>Activities that are offered outside the school curriculum. These may take place on school premises and be organised by the school or by other organisations or they may be completely separate from the school.</p> <p>Extra-curricular activities appear to fall into three main categories: non-academic activity-based interventions, study support, and multi-strand extra-curricular interventions.</p>	<p>Statistical analyses of large data-sets looking at the associations between participation in extra-curricular activities and academic attainment:</p> <ul style="list-style-type: none"> • Sport (Marsh, 1993; Feigin, 1994; Marsh and Kleitman, 2003) • Extra-curricular activities (including art, ICT, building skills, dance, drama, cooking, etc.) (Marsh and Kleitman, 2002) <p>Intervention evaluations:</p> <ul style="list-style-type: none"> • Study support (MacBeath, <i>et al.</i>, 2001) • Extended schools activities (LaFrance Associates, 2005) • Learning centres (Dynarski, <i>et al.</i>, 2002) • Children's University (MacBeath, 2011) 	<p>There is evidence of small effects of extra-curricular activities on attainment and on aspirations, locus of control and valuing school. The evidence suggests that involvement in these activities may lead to improved attainment (small effect sizes of less than 0.1) but it is far from clear how this occurs. There is stronger evidence for improvements in attitudes (small effect sizes, though greater than 0.1) but whether and how these gains are translated into attainment is not clear.</p> <p>In general, academically focused activities and study support tend to have a higher impact on attainment than do sports or other non-academic activities. Study support, in particular (and perhaps other extra-curricular activities, in general) appears to show some potential for narrowing the gap for more socio-economically disadvantaged and minority ethnic pupils.</p>
Interventions with children – mentoring	<p>The direct mentoring, often 1:1 of a young person by a mentor, often an adult.</p>	<p>Six mentoring interventions:</p> <ul style="list-style-type: none"> • Big Brothers Big Sisters (BBBS) (Herrera, <i>et al.</i>, 2007) • Student Mentoring Program (Bernstein, <i>et al.</i>, 2009) • Formalised Peer Mentoring pilot (Parsons, <i>et al.</i>, 2008; Mentoring Befriending Foundation, 2010) • Aimhigher Kent and Medway (Smith, 2010; Moore and Dunworth, 2011) 	<p>Mentoring interventions can be associated with positive impacts on attainment (effect sizes from 0.09–0.6) but there is little evidence that this impact is mediated by changes in aspirations, locus of control or valuing school. There is only one study that reports statistically significant impacts in attitudes (scholastic efficacy, 0.1.1) and many measures are only loosely linked to the attitudes relevant to this review.</p>

(continued overleaf)

Table 1 continued

Search area	Definition and scope	Interventions and reviews	Summary of findings
Interventions with children – mentoring <i>continued</i>	Peer mentoring is where young people work or engage with other young people on an area of learning, experience or development. Mentoring varies in terms of its purpose, general or targeted (i.e. social, academic, employment); the model used for the communication (advice giving, target setting, reflective listening); and the identity of the mentor(s) (peer, teacher, family member, experienced adult, external successful professional).	<ul style="list-style-type: none"> • Time to Read (Miller, <i>et al.</i>, 2009; Arlow, 2009) • Mentoring and target-setting in a secondary school in England (Younger and Warrington, 2009) <p>Reviews and other evidence:</p> <ul style="list-style-type: none"> • Review of impact of informal mentoring: Add Health and AHAA (Erickson, <i>et al.</i>, 2009) • Reviews of research on effects of mentoring: (Foster, 2001; DuBois, <i>et al.</i>, 2002; Hall, 2003; Hansford and Tennent, 2003; Hansen, 2007; Herrera, <i>et al.</i>, 2007; Philip and Spratt, 2007; Bernstein, <i>et al.</i>, 2009; Farruggia, <i>et al.</i>, 2010) • Peer mentoring for adults (Cupples, <i>et al.</i>, 2011) 	There are small indications that mentoring could have a relatively favourable impact on more socio-economically disadvantaged young people and therefore have some potential for narrowing the gap in attainment. Some of the impacts have fairly large effect sizes but these studies suffered from the lack of an adequate control group. Even using the relatively small effect size from a US study, we found that effective mentoring interventions could provide good value for money.
Interventions with children – volunteering and peer education	Young people freely offer time, skills, leadership or conveying information to their peers or adults.	<p>Four volunteering and peer education interventions:</p> <ul style="list-style-type: none"> • Millennium Volunteers (MV) initiative (Institute for Volunteering Research, 2002) • Active Citizens in Schools (ACIS) (extending MV to a younger age group) (Ellis, 2005) • Overseas expeditions (Sheldon, <i>et al.</i>, 2009) • Peer educators involved in sex education (Ashcraft, 2008) 	There is robust qualitative research evidence from a particular peer education intervention (Ashcraft, 2008) of impact on educational skill development and on engagement in education as a result of a change in the set of three attitudes. The detailed ethnographic study gives some understanding of how attitudes were changed and how this led to educational attainment.

(continued overleaf)

Table 1 continued

Search area	Definition and scope	Interventions and reviews	Summary of findings
Interventions with children – volunteering and peer education <i>continued</i>	Volunteering includes peer education and can involve health.	<p>Reviews and other evidence:</p> <ul style="list-style-type: none"> ● Scouts; Prince's Trust on youth work (House of Commons Education Committee, 2001) ● Review of evidence on youth volunteering (Institute for Volunteering Research, 2002; Hill, <i>et al.</i>, 2009) ● Peer-delivered health promotion review (Harden, <i>et al.</i>, 2001) ● Government reviews (Russell, 2005; Morgan, 2008) ● Peer drug education programmes (Orme and Starkey, 1999) 	<p>All relevant studies of volunteering and peer mentoring are based on qualitative research. In particular, there is no attempt to obtain objective quantitative measures of educational attainment or employability. There is a need for some robust quantitative research in this area.</p> <p>It may be the case that volunteering impacts on attitudes and attainment but the research has not been carried out to look at this. With one exception, there is little evidence that volunteering improves employability and educational outcomes by changing attitudes.</p> <p>Socio-economically disadvantaged young people and young men tend to be under-represented, but where there was a strategy to engage them, there was some indication that they perceived clear benefits. There is a widespread belief that volunteering could be particularly helpful for less advantaged young people but we found no studies that tested this belief robustly.</p>
Interventions with children – interventions with a primary focus on changing attitudes	Direct teaching or training to change attitudes.	<p>Specific interventions:</p> <ul style="list-style-type: none"> ● AERO (Aspirations, Encouragement, Realism and Openness) (Doel, 2009) ● 'Go for it!' and 'It's up to me!' (Hughes, <i>et al.</i>, 2006b; Hughes, <i>et al.</i>, 2006a). ● SEAL (Social and Emotional Aspects of Learning) (Humphrey, <i>et al.</i>, 2008) <p>Reviews and other evidence:</p> <ul style="list-style-type: none"> ● Meta-analysis US provision (Durlak, <i>et al.</i>, 2010) 	<p>Interventions where the primary focus was on changing attitudes could have an impact on attitudes but there is little evidence for a subsequent effect on educational attainment. However, in the UK such impacts are difficult to identify and, when they exist, they tend to be small and contradictory.</p> <p>Evidence that relates specifically to impacts on the attitudes that are the focus of this review is barely visible: we looked at only one set of interventions that aimed to raise aspirations, and another that aimed to raise self-efficacy (related to locus of control). Interventions were generally targeted at children with difficulties. There is no evidence of the extent to which such interventions could contribute to narrowing the gap for more socio-economically disadvantaged pupils.</p>

Interventions with parents

Definition

The set of interventions for parents provides a large and diverse research literature that includes evaluations of:

- parenting programmes and other interventions that sought to improve at-home parenting;
- interventions to involve parents in schools; and
- other interventions to involve parents in their children's learning and in their own learning.

The review found no studies that measured parental aspirations and that also measured educational attainment. Three interventions were reviewed that measured parent self-efficacy (that we define as equivalent to locus of control) for parents or children. Eight interventions in some way measured or looked for change in the valuing of school, as defined in this review. For the purposes of this review, a parent's involvement in and encouragement of their child's learning, development and education either at home or in the school was defined to be synonymous with the attitude of valuing school. There were no interventions reviewed that directly measured parents' valuing of school.

Many interventions were excluded from the review for not fulfilling the review criteria, such as all studies of parent programmes that either did not look at educational attainment or did not collect data on one of the set of three attitudes. This involved the exclusion of many interventions that have found to be effective for other reasons, such as early intervention or parenting support. The evaluations of Sure Start and extended schools interventions were therefore excluded, but we return to multi-strand interventions in Chapter 3. We also excluded a large number of studies looking at associations between, for example, measures of parental aspirations and measures of child outcomes, as these were not interventions.

The interventions were concerned with parents of children of all ages, from preschool to those at all stages of schooling, but most were concerned with parents of preschool children or those transferring to primary school. Most of the interventions were aimed at parents that were classified in some way as socio-economically disadvantaged. 'Disadvantage' was variously referred to in terms of low socio-economic status, low income, deprivation, or parental qualification, but was not clearly or critically defined. However, it was defined in enough detail to judge appropriate for inclusion in this review. Most interventions aimed to engage 'parents' but in fact worked predominantly with mothers. Few interventions considered ethnicity.

Specific interventions: considering the impact on self-efficacy (locus of control)

Home Instruction for Parents of Preschool Youngsters (HIPPY)

This intervention aims to increase parental involvement and enhance school readiness for children aged between 3 and 5. Parents work with their child for 20 minutes a day on a curriculum that is developmentally appropriate, supported by home visits, materials and group meetings. The curriculum consists of role playing with weekly activity packets, including storybooks and equipment for the study of mathematics and science. The curriculum is designed to encourage the development of language, problem solving, logical thinking and physical, emotional and social skills.

The evaluation (Nievar, *et al.*, 2011) focused on the use of the programme in the US with low-income, Spanish-speaking families. A quasi-experimental design was used to study two cohorts of families:

- cohort 1: families of 108 children selected to take part in HIPPY, recruited through word of mouth, and 54 families on the waiting list;
- cohort 2: families of 131 third grade children who had already participated in HIPPY and a comparison group of 131 of their peers, matched on similar demographics.

The findings for cohort 1 indicated that parents with higher scores on the quality of home environment were less stressed, less depressed and reported more parental self-efficacy. The home environment was more enriched for children in the HIPPY programme and their mothers had significantly higher parenting self-efficacy.

The findings for cohort 2 indicated that reading scores were not significantly higher for HIPPY children than for children in the control group, but that maths scores were significantly higher. These findings held whether children had attended pre-kindergarten or not.

This study was limited by the lack of a randomised control group, the focus on a particular group of parents and the lack of demographic data available for the comparison group making it difficult to know how different or similar their characteristics were to those of the intervention group. However, there are some aspects of the programme that are interesting in the context of programme design. For example, a key factor in programme success was thought to be the use of native-speaking paraprofessional home visitors from the same community, who were able to build good relationships with families.

Hands-On Parent Empowerment (HOPE) Program

The HOPE Program was designed to give socio-economically disadvantaged parents the skills to be able to support their children's development. The target population for the intervention was new immigrant parents with preschool children in Hong Kong. Thirty weekly two-hour sessions, supported by homework activities, were delivered by social workers in preschool settings and concentrated on:

- behaviour management techniques;
- building social networks between parents; and
- language and reading skills.

Participants in the programme were recruited through preschools.

There were seven preschools in which families could participate in the HOPE intervention, and six preschools were selected as a comparison, in which parents took part in a six-session parenting course. The outcome measures included individual intellectual assessments of children, parent reports of child behaviour, and measures of parenting stress, social support and self-efficacy. Focus groups and individual interviews were also held with parents and preschool staff. There were 66 parents in the intervention group, and 54 parents in the comparison group.

The evaluation (Leung, *et al.*, 2011) found that parents in the intervention group reported fewer behavioural problems and less parenting stress than parents in the comparison group. The quantitative data also showed that parents in the intervention group indicated that they had higher post-intervention social support than other parents. These findings were supported by the qualitative interview data. However, there was no statistically significant

The evaluation found that participation in the transition programme predicted parents' self-efficacy beliefs and in turn these beliefs predicted children's academic abilities.

impact on self-efficacy and no significant differences in child learning score were found.

The evaluators acknowledged that the sample size was rather small, and that the scales they used may not have been culturally valid for this group of Chinese families. They recommended further studies to strengthen the evidence base. They concluded, however, that the delivery of this kind of intervention in preschool can be successful in establishing good relationships between preschools and parents, and can be an important source of help and support for socio-economically disadvantaged families.

Head Start Transition Demonstration project

Head Start was a national programme introduced in 1964 in the US targeting children aged between 3 and 5 and providing a variety of services, including education in the form of preschool, nutrition and medical services, and parental involvement in education. This Transition Demonstration intervention offered a programme of health and support services, parent involvement, and developmentally appropriate practices for former Head Start children and their families as they made the transition from Head Start to elementary school. The aim was to support parents to continue to be involved in their children's education, and to enable children to maintain the cognitive and social gains made during their Head Start years. Each of the 31 Transition Demonstrations was very differently organised.

The Transition Demonstration evaluated by Seefeldt, *et al.* (1999) focused on the goal of enabling parents to become equal and efficacious partners in their children's education. The programme was largely delivered by family service co-ordinators – licensed social workers in each Transition Demonstration school. The family service co-ordinators and their assistants, who were representative of the same ethnicity and racial groups as the parents, and who were former Head Start parents themselves, served as appropriate role models for parents and encouraged parental self-efficacy. A number of additional activities designed to foster parental self-efficacy were implemented:

- monthly family dinners at school (attended by head teacher, teachers and parents);
- the joint construction by parent, current and former teachers, of an Individual Transition Plan;
- access to a psychologist;
- information on parenting skills; and
- access to children's books, educational supplies and suggestions for working with their children on educational tasks.

Two clusters of four schools each were created by matching pairs of schools on a number of relevant criteria. One member of each pair was then randomly assigned to either demonstration or comparison status. Children and their families in the demonstration schools participated in the Transition Demonstration; those in the comparison did not. There were 133 former Head Start children and their parents in the spring of the children's kindergarten year, 80 in the demonstration schools, and 53 in the comparison. A number of racial and ethnic groups were represented in the sample. Parents and their children in the demonstration and comparison schools were highly similar – no significant differences in family income, total level of social and material resources, level of parents' education, or family composition were found.

The evaluation found that participation in the transition programme predicted parents' self-efficacy beliefs and in turn these beliefs predicted

children's academic abilities. In addition, the level of parent education significantly predicted parental self-efficacy beliefs. In turn, parental self-efficacy beliefs significantly predicted children's academic ability. Even though the majority of parents said they had a high school diploma, those with higher levels of education believed themselves to be more efficacious.

The authors speculated that the support of the parents' self-efficacy could be attributed to the role of the family service co-ordinators. This, however, raises the question of whether these results are person specific, or if they could be replicated in other sites with differing family service co-ordinators. This study did not relate self-efficacy to individual parent differences in participation in specific Transition Demonstration programme activities or explore the pathways by which specific family service co-ordinator activities led to parental self-efficacy. Since self-efficacy beliefs are related to choice of behaviour, and help determine both how much effort people will expend on an activity and how long they persevere, the relation between self-efficacy and children's academic abilities is plausible.

However, a national evaluation of Transition Demonstration (Ramey, *et al.*, 2000) failed to find specific impacts. The evaluation randomly allocated school clusters: one cluster to receive the Transition Demonstration services (demonstration group) and a second to become the comparison (control) group receiving typical services. Numbers of children were 3,411 in the demonstration group compared with 3,137 controls.

Despite showing clear and sustainable gains from Head Start, the evaluation found no statistically significant impact of Transition Demonstration on child outcomes, though parents reported favourably on the programme. The absence of significant impacts on pupil outcomes was thought to be due to the variable nature of Transition Demonstration in each school, and due to the implementation of transition arrangements in control schools.

Specific interventions: involving parents in their children's learning

The Houston Parent-Child Development Center project

This project in the US aimed to improve school attainment in young children (aged 1 at the start of the intervention) via a series of home visits, family workshops and education-focused classes for parents around child development and childcare, spread over two years. The primary assumption was that mothers could teach their own children if they had the appropriate knowledge and skills.

The US intervention was targeted at low-income Mexican-American parents who were recruited by going door to door. Parents were randomly assigned to either the programme group or a control group. The evaluation (Johnson, 1990) followed four cohorts of parents. Measures of mothers' behaviours, child development and child IQ were used at three points in time: at the start of the intervention, and when the child was 2 and 3. A locus of control scale was also used, although the results were not reported. In addition, interviews were conducted with parents and the interaction between mothers and their children was video-recorded.

Positive outcomes were reported for the families who completed the programme. At the ages of 2 and 3, the children of the programme families displayed significantly better mental development based on IQ measures than the children of the control sample. The IQ scores of the programme children stayed at or near the national average, while the control groups' scores fell on average by eight points. Mothers in the programme group were found to be providing a more stimulating learning environment in the home.

Although the evaluation included a control group, the study suffered from significant attrition, perhaps due to the intensity of the intervention. Only 82 of the 185 parents who started the programme completed it and only 101 of the 188 parents in the control group remained in the evaluation. The authors cautioned that a follow-up study is needed to fully understand child outcomes. They also pointed out that programmes need time to develop fully. Results were better for later cohorts than earlier ones and they attributed this to the development of the programme over time.

Parents as Teachers (PAT)

This US programme aims to foster positive parenting practices through a 'born to learn' curriculum, usually delivered over two or three years, that involves:

- monthly home visits;
- monthly group meetings (allowing parents to meet with and support each other);
- monthly 'screening' visits by parent educators to assess children's health and development; and
- connecting families with community, health and social service resources.

PAT is suitable for all parents but particularly targets those in vulnerable circumstances. A similar Parents as First Teachers programme has been developed in the UK but not evaluated.

The evaluation (Pfannenstiel and Zigler, 2007) took the form of a number of quasi-experimental studies involving 7,710 kindergarten children, between 1998 and 2000, in a stratified random sample of districts in Missouri. No information was provided on the gender or ethnicity of parents or children. Children were assessed on entry to kindergarten (aged 5) and at third grade (aged 8 or 9). A range of parent and child measures was taken, including a measure of school readiness and involvement in learning in the home. A secondary analysis of two existing data-sets was used to examine the effect of pre-kindergarten services, including the PAT programme, on school readiness and later school success of children in the early school years. Path analysis was used to test and support a causal model that predicted that PAT has both direct and indirect effects on school readiness and school attainment.

PAT parents were found to engage in effective child-rearing practices, such as enrolling their children in quality childcare, leading to children's increased school readiness and later school success. The length of PAT enrolment also had a significant effect on positive parenting practices. Parents who received PAT's 'born to learn' curriculum showed improvements in parent knowledge, parenting behaviour and parenting attitudes. However, detailed information was not available about the nature of the attitudes or effect sizes. After the programme, 95% of parents said that they interacted with their child more effectively, better understood child development and spent more time with their children. More than 75% of parents reported taking their child to the library regularly, modelling enjoyment of reading and writing several times a week, and giving children the opportunities to purchase or receive books several times a month.

PAT combined with preschool showed promise for narrowing the attainment gap between different income groups, as 82% of children who received PAT with preschool were assessed as ready for school, compared with 81% of more affluent peers with no PAT or preschool experience and 64% of poorer children with no PAT or preschool. The value of PAT was found to carry over to third grade attainment, with 88% scoring above the lowest level, compared with 97% of more affluent children with no PAT or preschool

and 77% of poorer children with no PAT or preschool. No further detail was available about comparison groups or the statistical significance of the findings of the evaluation and not enough information was provided to be able to assess its robustness.

The Tandem Project

This project encouraged parents from low socio-economic status backgrounds to play a greater role in preparing their children for school, as part of the Sure Start initiative. Sure Start children's centres were set up in England in 2006 in relatively socio-economically disadvantaged areas and offer early education, integrated with health and family support services, and childcare from 8am to 6pm. The Tandem intervention lasted for six weeks, and parents were given a series of games to play with their children, designed to develop basic pre-reading and numerical skills.

An evaluation of this initiative (Ford, *et al.*, 2003) involved 128 children (10 per cent of those invited) aged 33 to 46 months, from socially and economically deprived backgrounds. Of these, 63 lived in the designated Sure Start area and were more likely to be unemployed and have single mothers than the other 65 children. The children were divided into four approximately equal groups:

- Sure Start parent group – parents in a Sure Start area delivering the Tandem programme at home: 33 participants (18 boys and 15 girls);
- other parent group – parents in other areas who were generally of a higher socio-economic status, delivering the programme at home: 27 (18 boys and 9 girls);
- nursery intervention group – Tandem delivered at nursery: 35 (18 boys and 17 girls); and
- other nursery children as a control: 33 (19 boys and 14 girls).

Children were assessed on a number of tests of pre-reading and numerical skills before and after the intervention and again six weeks later.

In general, the groups that took part in the intervention made greater gains in skills than the control group. The nature of these gains differed between the three groups, and also differed in the same group in the post-intervention test and after six weeks. However, using a composite measure of attainment, the analysis found the control group made less overall progress than either the Sure Start parent group or the other parent group, although their gains were equivalent to those of the nursery intervention group. In addition, progress was significantly greater in the other parent group than the Sure Start parent group so, although socio-economically disadvantaged children benefited from Tandem, more advantaged children benefited more. Gains six weeks after the end of the intervention were largely consistent across groups. None of the measures showed a statistically significant drop in performance accuracy in the intervention groups, indicating that children maintained their skills even after they ceased practising them as part of the educational programme. The gains were therefore sustained. Improvements in child pre-reading and numeracy scores could not be explained by the amount of parental effort in support of the intervention. We treat parental effort as an indicator of valuing school. However, there was no detailed analysis of the effect of the programme on parents, although qualitative analysis suggests that parents valued the programme. Indeed, this value is demonstrated by the fact that, unlike many of the other programmes we have reviewed, no parents dropped out. However, the low drop-out may have been explained by the short duration of the programme (six weeks).

Families and Schools Together (FAST)

FAST is an eight-week (with follow-up sessions) after-school, multi-family (with up to 20 families at a time) support group to enable families to better connect the cultures of home and school. Each session is a highly structured evening of six elements:

- a shared family meal;
- group songs and family games, including communication exercises;
- responsive play therapy between a 'target' child and one parent;
- a discussion group for parents without pre-assigned topics (separate from the children, whose play is being monitored by volunteers in another room);
- a family lottery in which each family wins once to prepare the next week's meal (and is given supplies and/or funds for ingredients); and
- a graduation ceremony that includes speeches, food and diplomas.

During the first hour parents lead communication at their own family table while sharing a meal. The aim is for the child to experience the parental hierarchy, compliance to requests embedded in activity, family cohesion, and to have fun with his or her family while at the school. The discussion groups provide parents with an opportunity to build social connections and a shared identity. Play therapy is an opportunity for uninterrupted play with no teaching or directing. At the parent-planned graduation, the head teacher congratulates the parents for their involvement and the team members present behaviourally specific affirmations to each parent.

For the two years following graduation, families are encouraged to participate in FASTWORKS. This involves monthly meetings for several families designed to build and maintain long-term support. These meetings are run by parents with gradually decreasing support from practitioners.

FAST was developed in the US and was recently rolled out by Save the Children in the UK, one of its aims being to enable children to succeed at school and have stronger life chances due to increased attainment and improved home-school relationships. The research referred to here was carried out in the US.

Although much of the US evidence centres around the efficacy of FAST in relation to health and behavioural outcomes, attention has started to focus on educational outcomes. Some studies showed an increase in attainment, largely based on teacher or parent reports rather than on test scores. FAST had a standardised evaluation package which included standardised questionnaires with accepted validity and reliability. The measurements were administered using a pre- and post-assessment at home and in the school by both parents and teachers. Evaluations of FAST have shown the programme to be successful in some contexts in the US (where it has been running since the 1980s) at engaging parents, improving the behaviour of children, supporting family functioning and encouraging volunteering. There has also been some evidence (mainly teacher-reported) of improvements in school attainment.

However, the results have been mixed. McDonald, *et al.* (2006) reported an effect size for attainment of 0.25 but did not examine any impacts on the attitudes of relevance for our study. Crozier, *et al.* (2010) reported on a somewhat larger study that did not examine attainment but did examine the impact on self-efficacy (parent-reported) and parents' involvement in school (teacher-reported), which could be considered a proxy for valuing school. The impact of FAST was not found to be statistically significant on either attitude. However, parent-reported involvement in school did exhibit a statistically significant increase. While McDonald, *et al.* reported a relatively high retention

rate of 85%, the retention rate in the larger study by Crozier, *et al.* was only 65%.

Reports of a pre-post evaluation of the pilot implementations of FAST in 15 primary schools in the UK (McDonald and Fitzroy, 2010) claimed that teachers reported fewer FAST children in the bottom 30% of the class for reading, writing and mathematics. FAST children's academic motivation as rated by teachers also showed fewer children in the lowest 30%. Questionnaire responses from parents identified that 88% of participating parents said that they were now more able to support their child's education. This FASTUK evaluation was of families of four in which 85% were living beneath the poverty line. Of all those who attended even once, 83% went on to complete the programme. However, no further detail is available at this time.

The Home–School Knowledge Exchange (HSKE) project [H4]

The HSKE project took place between 2001 and 2005 and was part of the Economic and Social Research Council's Teaching and Learning Research Programme. Its overall aim was:

to develop, understand, measure, evaluate and disseminate ways in which pupil attainment and learning disposition can be enhanced by a process of knowledge exchange and transformation between parents and teachers, which also involves researchers and children themselves.

– Hughes, 2006

The project set up and evaluated the impact of action research in four primary schools (two in Bristol and two in Cardiff) in which parents, teachers and children worked together to exchange knowledge between home and school.

There were three main strands to the research:

- literacy at Key Stage 1;
- numeracy at Key Stage 2; and
- transfer from primary to secondary school.

Within each city, one school had a higher proportion of children eligible for free school meals, while the other had a lower proportion of eligible children. In the transfer strand, the main secondary school to which children would transfer was also involved. In addition, a set of 'comparison' schools were recruited, matched to the action research schools, but which did not engage in HSKE activities.

In each strand, an experienced teacher was seconded to work alongside school staff, developing HSKE activities and supporting their implementation. The effect of HSKE activities on children's learning was assessed through attainment tests and the Effective Lifelong Learning Inventory test of learning disposition. More qualitative investigations were carried out with six 'target' families from each class. These involved interviews with parents, teachers and children, videos of literacy/numeracy events taking place at home, and observations of children in school.

The HSKE activities developed in this project were well received by teachers, parents and children. On the whole, they served their purpose of transferring knowledge and information between home and school. In addition, some activities became embedded in school practice after the project had finished. HSKE activities were found to have a significant impact on children's attainment, although this effect was not found uniformly across every strand of the project. In the literacy strand, children who had experienced HSKE activities made significantly better progress in Cardiff but not in Bristol. In the numeracy

strand, the effect of HSKE activities on children's attainment was positive but not significant. In the transfer strand, children who had attended schools which carried out HSKE activities made significantly better progress in reading than children who had not. Children from HSKE schools were also more positive about their own learning and appeared to have adjusted more quickly to some aspects of secondary school.

The results of this research may be promising but the details of the data and the way that it was collected do not appear to be available.

Parent leadership in school–community collaborations

Warren, *et al.* (2009) conducted an investigation into the nature and impact of parent involvement in three school–community collaborations:

- the Logan Square Neighborhood Association in Chicago, Illinois;
- the Camino Nuevo Charter Academy in Los Angeles, California; and
- the Quitman Street Community School in Newark, New Jersey.

These interventions involved local businesses taking an active role in encouraging and facilitating parental engagement with local schools, and in working with parents to develop their leadership skills. This approach enabled community members to take an active role in leading and developing community projects and to contribute to changes both in their local communities and in local schools. The community projects included schools at all stages – primary, middle and high.

The evaluation aimed to document how parent engagement changed over time and to identify continuing problems and challenges. Researchers used a variety of qualitative methods including interviews, participant observation and document analysis to collect data in two rounds of fieldwork, looking for evidence of parental engagement and involvement in school activities.

The approach taken by these schools engendered better relationships with parents. It also developed the capacity of parents for leadership and worked to close the gaps in culture and power between school staff and parents. There was some evidence that this approach had led to school improvement, and in the case study all schools reported rises in attainment over the time that these parental involvement initiatives had been in place.

Due to the nature of the study, the researchers were unable to disentangle the reasons for improved educational outcomes for children when community and parental engagement work was undertaken alongside other school initiatives aimed at school improvement. They also acknowledged that their work could not be generalised, although they did make some claims that it was representative. Their recommendation was that because communities have different needs, aspirations and desires for their children's education, collaboration between schools and communities can enable appropriate initiatives to develop that meet the needs of the school community.

Specific interventions: involving parents in their children's learning and in their own learning

Engaging Parents in Raising Achievement project

This was one of the few projects aimed at parents of secondary school pupils, and aimed to pilot new ways of engaging parents in learning: both their own, and that of their children. It was implemented in over 100 secondary schools in England. Each school's projects varied but included at least one of the following:

- activities to equip parents with the knowledge and skills to support their children's learning from home (understanding the Key Stages 3 and 4 curriculum, stimulating parents' aspirations for their children);
- the re-engagement of parents with low or no formal skills or qualifications in learning;
- parenting courses;
- new technologies to inform parents about their child's progress;
- supporting parenting in the home through parent support advisers; and
- specific projects for different parent groups.

The evaluation (Harris and Goodall, 2007) used qualitative data from case studies of project progress in all schools and illuminative case studies of 20 of the most innovative projects. All the case studies involved semi-structured interviews and focus groups with a cross-section of respondents including teachers, parents, support staff and students: 95 members of school staff, 81 parents, 124 students and 14 others (including governors and members of outside agencies working with schools). There were 314 respondents in total.

The research showed that schools tended to focus on involving parents in various activities that were reportedly found to be enjoyable and socially reinforcing. However, such activities often did not impact upon learning. They tended not to focus on activities that encouraged learning in the home. The authors claimed the research showed a consistent relationship between increasing parental engagement (particularly of hard-to-reach parents) and improved attendance, behaviour and student attainment. They also claimed that parental engagement in children's learning in the home made the greatest difference to student attainment. Most schools were involving parents in school-based activities in a variety of ways but the evidence shows this had little, if any, impact on the subsequent learning and attainment of young people.

This was mainly qualitative case study research, and did not include a control or comparator group. There was also no longer-term follow-up. However, the authors identified several learning points for implementation of similar schemes. They recommended that schools:

- offer bespoke support to those parents least likely to engage with the school (such as those from ethnic minorities);
- concentrate on supporting those parents already involved in learning, as well as engaging those who are traditionally difficult to involve.

Family Literacy Initiative

Under the Family Literacy Initiative several family literacy demonstration programmes were established in areas of multiple deprivation in England and Wales. Children aged between 3 and 6 and their parents took part in twelve-week courses that involved:

- accredited basic skills instruction for parents;
- early literacy development for young children; and
- parent and child sessions encouraging pre-reading and early reading skills.

An initial evaluation (Brooks, *et al.*, 1997) was carried out over four terms during 1994 and 1995 in four schools with relatively high percentages of children receiving free school meals. Parents and children were assessed on reading and writing, and children on vocabulary development, near the end of the course, twelve weeks after and nine months after the end of the course. In 1997 there was a re-assessment of 154 parents and 237 children who

Programme children were superior to their control peers in the support they received from their families, their classroom behaviour and their probable success in school, and equal to their peers in other academic and motivational respects.

had participated in the family literacy demonstration programmes during 1994 and 1995 (60 per cent of those who had taken part in the initial evaluation). Interviews were carried out with 37 teachers to ask about the progress of a sub-sample of children.

The evaluation found that the children who had taken part had maintained the gains made in vocabulary, reading and writing. Follow-up after two years suggested that gains made during the programme were being maintained.

The extent of need in areas of deprivation was suggested by the finding that all of the children continued to need extra help, the exception being that the girls' performance in writing was now closer to the national average and they were deemed not to need extra help. Programme children were superior to their control peers in the support they received from their families, their classroom behaviour and their probable success in school, and equal to their peers in other academic and motivational respects. Parents thought their ability to help their child in reading and writing was continuing to be of benefit.

These findings are promising. However, the children's attainment measures were not compared with control groups, although they were standardised against national averages. In addition, much of the data relied upon subjective viewpoints rather than measurement, such as teachers' views about the level of parent involvement.

How interventions with parents work

In general, interventions for parents focus on encouraging parents to play a more active role in their children's learning and development and, therefore, the evaluations concentrate on measuring this behaviour rather than on the attitudes that are the focus of this review. There was a kind of 'reinventing the wheel' nature of the interventions, in that there was almost no commonality between them; they did not seem to be designed to build cumulatively on what was learned from each. This was the case even with those focused on more curriculum-based areas, such as early literacy and numeracy. Intervention duration varied from six weeks to two years. It was not easy, therefore, to judge that they might be achieving similar aims.

For our purposes, we have taken changes in behaviour described as parental engagement in learning/schools as a proxy for changes in the valuing of school. This engagement is widely expected to support children's learning by:

- increasing the value the children place on school;
- giving parents practical knowledge that allows them to help their children with homework or project work, for example; and/or
- giving children moral support in overcoming difficult school tasks.

In terms of the design of interventions, where the programmes serve ethnic minority families, evaluators believe that it is important that the facilitators working directly with parents should come from the same community. Many of the programmes that can demonstrate some success are implemented in this way but there has been no attempt to test this hypothesis.

Retention is a big issue in these programmes: some lose 40–50 per cent of families. This may be because they make large demands on parents. Those programmes with relatively high retention rates appear to be those like FAST and Tandem that have a structured programme and materials and a high level of ongoing support for parents.

Table 2 – Estimated effect sizes for parenting interventions

Parenting interventions	Attainment		Attitudes	
	Effect size	Comments	Effect size	Comments
HIPPY (Nievar, <i>et al.</i> , 2011)	0.46	Significant at 1%: impact on maths only; no statistically significant impact on reading	0.66	Significant at 0.1%: impact on parental self-efficacy
HOPE (Leung, <i>et al.</i> , 2011)		No statistically significant impact		No statistically significant impact: parental self-efficacy
Head Start Transition Demonstration (Seefeldt, <i>et al.</i> , 1999)	0.17	Significant at 5%	0.24	Significant at 5%: parental self-efficacy
Houston Parent-Child Development Center (Johnson, 1990)	0.33	Significant at 5%: IQ measure		Locus of control measured but not reported
PAT (Pfannenstiehl and Zigler, 2007)		Insufficient information		Insufficient information
Tandem (Ford, <i>et al.</i> , 2003)	0.25	Significant at 1%: impact on socio-economically disadvantaged children with no nursery attendance compared with those at nursery without the programme		No evaluation of impact on parents or children
FAST (Crozier, <i>et al.</i> , 2010)		Impact on attainment not measured		No significant impact on measures of interest
FAST (McDonald, <i>et al.</i> , 2006)	0.25	Significant at 5%: teacher assessment		Impact on attitudes not measured
HSKE (Hughes, 2006; Hughes and Pollard, 2006)		Some indications of positive impact but insufficient information to calculate effect size		Some indications of positive impact but insufficient information to calculate effect size
Parent leadership in school–community collaborations (Warren, <i>et al.</i> , 2009)		Some indications of positive impact but insufficient information to calculate effect size		Qualitative indications of increases in parent involvement
Engaging Parents in Raising Achievement (Harris and Goodall, 2007)		Some indications of positive impact from qualitative data		Some indications of positive impact from qualitative data
Family Literacy Initiative (Brooks, <i>et al.</i> , 1997)	0.13 0.30	Listening vocabulary Reading	0.8	Support from family; teacher assessment

Summary of findings on effects

Overall effect on educational attainment, aspirations, locus of control and valuing school

Our overall conclusion is that there is no firm evidence that parent interventions impact on educational attainment by changing the attitudes of aspiration, locus of control or the valuing of school. This is not to say that these changes do not happen, but that the published studies have not been developed to test this.

Many of the evaluations do not measure attitudes directly; rather, they tend to measure behaviour that can be interpreted as reflecting attitudes. Where relevant attitudes are measured, the focus is parental self-efficacy (locus of control). The lack of evaluations that measured parent aspirations is surprising given the interest in claims made about the importance of parent aspirations for their children's future. It is also surprising given the large associational literature.

Summarising the information on effect sizes connected with the interventions reviewed in this section, there is some evidence that interventions with parents do have effects on both attainment and attitudes (see Table 2).

Interestingly, statistically significant impacts on attitudes that are of interest to this review prove harder to find. We found only two impacts on parental self-efficacy and one on parents' involvement in school.

In two interventions (HIPPI: see Nievar, *et al.*, 2011; Head Start Transition Demonstration: see Seefeldt, *et al.*, 1999), effect size estimates were found of 0.24–0.66 for self-efficacy, and of 0.17–0.46 for child attainment. However, the evaluation design and the complexity of the interventions did not make it possible to conclude that changes in attainment had come about as a result of changes in self-efficacy.

The parenting programmes reviewed showed that it is possible to increase educational attainment with effect sizes of between 0.1 and 0.5 for various programmes with preschool and/or primary school children. Most of the estimates, however, lie between 0.25 and 0.35. The interventions vary considerably in terms of length and delivery method. No clear pattern emerges, although the interventions of longer duration do appear to show greater effects.

Effects on particular groups

Many of the interventions for parents are focused on socio-economically disadvantaged families and most of the evaluations examine the impacts on a particular group as compared with the control. Only one study (Brooks, *et al.*, 1997) looked at the differential impact on girls and boys and found that in one area – writing – girls benefited more than boys.

To the extent to which the interventions were effective in raising attainment, their targeted delivery would be likely to have success in narrowing the gap for more socio-economically disadvantaged pupils. Where effects on different groups were examined explicitly, the impact of non-targeting was ambiguous. The evaluation of the Tandem programme appeared to show that while both socio-economically disadvantaged and non-socio-economically disadvantaged families benefited from intervention, the latter group benefited more. On the other hand, if the effects of the PAT programme prove to be statistically significant, this intervention does show promise in narrowing the gap in attainment.

Costs and benefits

The programmes vary a great deal in their method of implementation, ranging from PAT's continuing involvement of parents over two or three years (or even longer) to FAST's eight-week course with its two-year peer support programme. It is impossible, therefore, to undertake a cost–benefit analysis of a 'typical' parenting programme.

However, to demonstrate what would be involved in such a cost–benefit analysis we have selected the FAST programme as an example because its highly structured approach allows us to specify the inputs required to deliver it. In addition, its effect size on attainment lies towards the lower end of the typical effect sizes, thus leading to a conservative view of the benefits.

Costs

FAST is a very well documented intervention¹ but even in this case it is quite difficult to identify all the inputs required for delivery. The estimates in our example are based on the following assumptions.

The intervention is aimed at families with children aged 5 to 9 and includes 8 weekly sessions led by professionals, followed by 22 monthly sessions led by parents.

The professional team delivers only one programme, so all training costs can be attributed to a single programme. This assumption will overstate the costs to some extent in a sustainable programme and, since training costs account for almost 50 per cent of programme costs (see the Technical Report), this overstatement could be considerable. However, we have no way of estimating attrition from the team as the programme is repeated. That single programme serves 40 families.

These assumptions result in an estimate of £33,158.18 as the cost of the programme for 40 families.² We have not included costs arising from the considerable time inputs by participating parents (with the exception of the parent partners), nor have we allowed any costs for the rooms required to deliver the programme. There would be a good argument for including parents' time as a cost because such time is a real resource that could be used for other purposes. The argument against including their time is that they are receiving a valuable service. However, the counter-argument would be that parents are likely to consider their own time inputs as a cost when considering whether to accept the intervention. This aspect obviously requires more detailed research.

Benefits

An effect size of 0.25 at Level 2 is equivalent to an increase in just over one point in the Average Points Score (see the Technical Report). Since there are about six points to each level and assuming that attainment is distributed equally across each level, this implies that one child in six will achieve a higher level. The expected value of one child achieving a higher level is £74,000, so the expected value from 40 families will be £493,333.²

Could parenting programmes provide value for money?

The cost of providing FAST for 40 families is estimated at £33,158.18 and the expected value of this investment is £432,000. This appears to provide good value for money.

Conclusions

- The review looked at three interventions that measured parent self-efficacy and eight interventions that considered impact on a parent's involvement in and encouragement of the child's learning, development and education

either at home or in the school, and this was defined to be synonymous with the attitude of valuing school.

- Many of the evaluations did not measure attitudes directly; rather, they tended to measure behaviour that can be interpreted as reflecting attitudes. No interventions were found that considered change in aspirations or that measured change in locus of control. Where relevant attitudes were measured, the focus was parental self-efficacy (locus of control). The lack of evaluations that measured parent aspirations was surprising given the interest in claims made about the importance of parental aspirations for their children's future.
- Most of the estimates of effect sizes for educational attainment were between 0.25 and 0.35. Information was lacking from most studies to calculate effect sizes for attitudes. However, effect size estimates were found of 0.66 and 0.24 for self-efficacy, and of 0.8 for teacher-assessed support from family.
- There is no evidence that a change in child attainment is mediated by a change in the attitude of aspirations, locus of control or valuing school. There is, however, some indication that such a change may be mediated by a change in the actions associated with helping child development and learning at home.
- Interventions for parents that were reviewed fell into three main types in terms of their focus: improving at-home parenting to facilitate learning, involving parents in schools, and involving parents in their children's and their own learning. There was considerable variation in interventions in terms of the nature of the intervention and the duration.
- Many of the programmes had high drop-out rates. There was speculation that this was a result of the intensity of the intervention and the demands made upon parents.
- Few interventions considered ethnicity. Most worked predominantly with mothers. Most focused on socio-economically disadvantaged parents, although this was not clearly defined.
- Although effect sizes for educational attainment were not large, the value of the outcomes relative to the estimated costs suggests that interventions for parents could provide good value for money.

Extra-curricular activities

Definition

'Extra-curricular activities' refers to a wide range of activities, aiming to recognise and develop skills (Gilligan, 2007), interests and a sense of competence. They may also increase the young person's locus of control, aspirations and the value they give to learning. They involve very diverse pursuits, such as sport, arts, ICT, drama, practical skills, and study skills. They appear to fall into three main categories:

- non-academic activity-based interventions;
- study support; and
- multi-strand extra-curricular interventions.

The common features are that they are normally school-based, but take place outside of normal school hours and are, therefore, voluntary.

Although extra-curricular activities are generally voluntary, with diverse options offered to all, there is also a history of offering them to socio-economically disadvantaged communities, and to other targeted groups. All

studies included in this review related to activities appropriate for all income groups, with the interventions mostly targeted at the socio-economically disadvantaged.

The extended schools initiative in the UK and its equivalents in the US and parts of Europe have also tended, whatever else is offered, to include a range of activities before and after school. Few evaluations were concerned with impact on both educational attainment and one or more of our set of three attitudes, and so most were excluded from this review.

Decisions relating to review inclusions are justified in this section in relation to the particular studies, as some studies were included that did not fulfil our review criteria.

Specific interventions

Sport and other non-academic activities

There is a considerable literature, spanning several decades, which tries to establish whether involvement in sport is beneficial for academic attainment. This literature consists of studies – usually of US data – and generally based on statistical analysis of large data-sets. Although these studies do not refer to specific interventions, some are interesting because they are indicative of promising avenues to pursue. We have excluded much of this literature because of the problem of separating cause and effect. For many studies, all that can definitively be found is an association between being successful in school sport and being academically successful. Even longitudinal studies, where measures of school attainment from previous years are also considered as predictors of current levels of attainment (see, for example, Fejgin, 1994), do not so much solve this problem as provide a sense of the scale of the difficulty. However, there were a number of such studies that used methodologies that could investigate change rather than associations.

Marsh (1993) responded to this methodological challenge by controlling for a number of background variables (for example, gender, ethnicity, socio-economic status), but also a wide range of previous success (for example, school grade, attendance, self-concept) as measured by scores on scales which were then collected again in later years. The difference between the association of each measure with sport participation on the two occasions was considered to show the impact of that participation. These analyses allowed Marsh to conclude that 'participation in sport has many positive effects with no apparent negative effects and these positive effects are very robust'. What Marsh did not mention, however, was that there were no statistically significant effects observed on attainment.

A more recent study (Marsh and Kleitman, 2002), which extended the method described above to consider other extra-curricular activities as well as sport, similarly found social/academic effects: participation in sport was particularly associated with increased educational aspirations and the number of university applications, but not necessarily with raised test scores. These studies may be interpreted (as they were by both Marsh, 1993 and Fejgin, 1994) to support ideas about attitudes mediating between sporting success and expectations of wider – including academic – success. Importantly, however, Marsh also drew attention to the potential for sport played for the school to enhance the player's identification with or commitment to the school, with this providing another route to enhanced academic self-concept (Marsh and Kleitman, 2002; Marsh, 1993). Such proposed changes to how a student feels about the school once they are successfully involved in sporting activities would seem to parallel the reported effects of being valued as a peer mentor or educator.

It would seem possible to increase the availability of extra-curricular provision, as both Marsh (1993) and Fejgin (1994) discussed, and this could be seen as a potential intervention. However, the problems of self-selection could be particularly severe in the case of sport and some other activities. This was suggested by Fejgin's (unsurprising) finding that males from higher socio-economic status quartiles are more likely to participate in sport, although Marsh and Kleitman (2002) found beneficial results for all participants, holding socio-economic status constant. This implies that interventions may need to be targeted in some way so as to reduce differentials in attainment.

Marsh and Kleitman (2002) found that the impact of other (mostly) non-academic activities was not uniform, as follows:

- cheerleading and hobbies: no effect;
- academic clubs and school publications: substantial numbers of positive effects;
- performing arts and student government: predominantly positive effects similar to those of sports; and
- vocational clubs: mostly negative effects.

Fejgin (1994) found a similar lack of uniformity although, because she used a different categorisation of activities, her results cannot be compared.

Marsh and Kleitman (2002) found indications of differential effects for different groups. Their analysis suggested that:

- there are more positive effects for groups with a lower socio-economic status;
- there are ambiguous implications with respect to the impact on groups defined in terms of prior level of attainment.

They reported no results on ethnicity. Fejgin (1994) did not test for differential effects.

It is difficult to find relevant data on UK examples of interventions of this sort. Although the Positive Activities for Young People evaluation (CRG Research Ltd, 2006) did collect information on both educational attainment and 'enjoying school', the positive effects found were at best only suggestive because, as the authors freely admitted, there was no control for other factors impacting on these outcomes.

Academic interventions: study support

A three-year longitudinal evaluation of study support in UK schools (MacBeath, *et al.*, 2001) compared the impact of study support with other extra-curricular activities. Study support was defined as learning activity, undertaken voluntarily by students out of school hours. The research tracked two cohorts, totalling over 8,000 pupils, from 52 schools (44 in England, 6 in Wales and 2 in Scotland); the larger cohort was tracked from Year 9 through to their GCSEs and the smaller cohort from Year 7 through to their Key Stage 3 SATs. Baseline data was collected on individual students as background information – age, gender and ethnicity, academic attainment, attitudes and school attendance. Similar outcome measures were gathered and linked to data on the participation of the individual students in various types of study support. Multiple regression analysis was used to identify the factors influencing the outcomes, in particular the effects of study support. Qualitative research looked at case studies of 12 schools and interviewed staff and students in 25 schools.

This study found that various types of extra-curricular activities could have a positive effect and, for the best five GCSE scores, study support had the highest impact. The effects were an average of three and a half grades on the best five GCSE scores or one more A–C grade pass at GCSE. The general picture was that participation in a range of activities could have a positive impact. In addition, the authors claimed that participation also had a positive impact on attitudes, although they did not provide any detail on how such attitudes might be measured.

This evaluation reviewed the potential differential impact on different groups. It found that:

- the impact of study support on boys and girls exhibits no significant differences;
- minority ethnic pupils appear to benefit more from study support (in terms of effect on attainment) and to be more likely to participate; and
- those entitled to free school meals appear to benefit more from study support.

The results are, therefore, very similar to those of Marsh and Kleitman (2002), although there are some important differences in terms of likelihood of participation.

Multi-strand extra-curricular provision

Extended schools provide examples of a multi-strand approach to extra-curricular provision. In addition to activities such as clubs and study support, extended schools can provide the whole range of interventions discussed in this report, with the possible exception of community-level initiatives. Although this approach to education has been widely studied – studies have been carried out in the US and Australia as well as in the UK – systematic study of the impact of extra-curricular activities has not found any convincing evidence of a link that connects extra-curricular activities, educational attainment, aspirations, locus of control and valuing school. To some extent, this lack of evidence is a result of the difficulty of assessing the impact of multi-strand interventions, particularly where the detailed specification of the intervention exhibits considerable variation across institutions (see Cummings, *et al.*, 2011). However, one US study was included (LaFrance Associates, 2005).

Extended schools – the Milton S. Eisenhower Foundation, Iowa

The Milton S. Eisenhower Foundation replicated the Full-Service Community Schools (FSCS) model in Iowa, providing a wide range of extra-curricular activities, with a small number of social welfare and support orientated provisions. Activities were both academic and non-academic, and a small number were offered to parents and families.

Through a quasi-experimental pre/post comparison cohort design (LaFrance Associates, 2005) the evaluation tested the hypothesis that students participating directly in the FSCS after-school programmes would show greater improvement over time than students not participating. Improvement was measured with respect to these outcomes: school behaviour (disciplinary action); school attendance; academic attainment; satisfaction with school; attachment to school; orientation towards learning; exposure to new activities; participation in school activities (outside of FSCS programmes); interest in non-academic subjects (art, music, dance, etc.); social support; self-esteem (sense of attainment); positive future orientation; positive peer and adult relationships; access to needed services; and sense of safety. Data on these outcomes was collected over two academic years, 2002–4. Of 689 students

at one school, Harding, 134 completed surveys at both the beginning and end of the school year (19% response rate overall). Approximately 71 (53%) of respondents were participants in FSCS activities. Of the 132 sixth, seventh and eighth grade students at the other school, Moulton, 30 completed surveys at both the beginning and end of the school year (23% response rate overall). Approximately 25 (83%) of respondents were participants in FSCS activities. In addition, students' and parents' own understanding were explored through focus groups. Parent outcomes that were measured included: communication home/school, communication among parents, support for learning at home and participation in school/support activities.

The findings (LaFrance Associates, 2005) suggested there were small limited improvements on some educational attainments and attitudes but not others, but there was insufficient data to calculate effect size overall. Qualitative data suggested that students who participated in the programme had more interest in learning, were more focused on the future, had more self-efficacy and had improved relationships with peers. This evaluation, despite its design, could not claim with confidence the effect of the FSCS on outcomes, and still less the effect of particular (albeit major) elements such as extra-curricular activities.

21st Century Community Learning Centers program

This US-funded initiative in after-school programmes provided funding in 2002 to 2,250 school boards. The evaluation (Dynarski, *et al.*, 2002) of this initiative collected student outcome data in five areas: after-school supervision, location and activities; academic performance and attainment; behaviour; personal and social development; and safety. The purpose was safe and drug-free learning environments for students, which support academic attainment.

In the first year, data was collected on 2,308 elementary school students (randomly assigned to programme vs no programme groups) in 18 schools in seven school districts, and 4,300 middle school students (in matched pairs) in 61 schools in 32 school districts. The evaluation also followed middle school students for a second year, which enabled it to explore whether there were outcome differences after two years. There was no collection of parent outcome data on involvement in school activities and employment status. Teacher reports of behaviour relating to valuing of school were assessed. Qualitative data looked at pupil attitudes including some reporting themes relating to aspirations, locus of control and valuing school.

The study (Dynarski, *et al.*, 2002) found few impacts (none statistically significant) on academic attainment, some impacts on parent outcomes, and some reports from elementary school pupils of a feeling for increased safety during after-school hours and from middle school pupils of increased college ambitions. Impacts that related to this review's set of three attitudes tended to be assessed from answers to a small set of closed questions, which raises questions about their validity as measures.

Children's University (CU)

The CU uses a range of extra-curricular activities together with direct and explicit links to a local Higher Education Institution to try to improve academic commitment and attainment among children in schools in socio-economically disadvantaged areas. Progress so far has been carefully assessed through an ongoing multi-method evaluation of how the intervention is delivered across schools and providers (MacBeath, 2011). This included the analysis of attainment data in 2007/8 and in 2008/9 at Key Stage 1 for children aged 7 (1,273 pupils), Key Stage 2 for children aged 11 (1,489 pupils) and in 2007/8, 2008/9 and 2009/10 at Key Stage 3 for children aged 14 (99 pupils), with disaggregation by gender, ethnicity, free school meals entitlement,

Neighbourhood Renewal Unit (NRU) and non-NRU areas. Pupils' attendance data was examined over nine school terms in sixteen local CU centres from 2006/7 to 2008/9. Comparative attendance data was analysed from almost 3,000 children in sixteen local CUs, disaggregated by NRU and non-NRU area. Questionnaires were given to 248 CU participants from 17 schools in six local CU centres and to eight local CU centre managers or co-ordinators. Follow-up interviews took place with 60 children and five local CU managers in three CU centres (and five schools) in Sheffield, Warwickshire and West London.

The evaluation reported promising results, with levels of attendance and attainment at Key Stages 1–3 higher for children involved in CU activities than for those not involved. The problem, as ever, is self-selection, which the evaluation recognised: 'Cause and effect are, of course, difficult to disentangle. Do children attend their local Children's University because they are better attenders or do they become better attenders as a consequence of CU involvement?' (MacBeath, 2011).

Unfortunately, the sample was too small to allow for an analysis of differences in impact according to ethnicity, but there was a small indication that girls could obtain more benefits than boys.

How extra-curricular activities work

We start our discussion on how extra-curricular activities work by considering the CU before looking at the other interventions considered in the review in this area. Analysing the possible routes by which engagement and success in CU activities could enhance school performance, it is notable that the siting of the activities within school enables participants to make connections between CU and school learning, although evidence from questionnaires implies that the students tend not to make such connections between CU success and wider school requirements (MacBeath, 2011).

This argument suggests that it might not be necessary for participants to make explicit links with school learning for their valuing of the school environment and education more generally to be enhanced. Related to such change, particularly given the aims of the CU, it might be expected that increased educational aspirations would be found. In the evaluation, however, reported suggestions of change in the aspirations of the student participants come from parents, teachers and CU managers, but not from the students themselves (MacBeath, 2011). However, attendance was better for those involved in the CU, suggesting that they placed a higher value on school.

In circumstances where there are fairly clear links between school learning and skills developed out of school, it seems reasonable to expect that engaging students out of school will produce benefits in school. Other research and experience, however, suggest that this need not be just about how closely club activities appear to mirror school learning. Eccles and Barber (1999) discussed how activity and social group came together to tie an individual into a particular lifestyle and personal development. They also offered some evidence of how activity choice and personal style became mutually reinforcing.

They also argued, as this suggests, that the particular benefits and impacts for participants vary across extra-curricular activities, with some more beneficial than others. As we have seen, this supposition is supported by research carried out in both the US and the UK. Marsh and Kleitman (2002) concluded that there was evidence that a range of extra-curricular school activities had positive benefits for participants in terms of tending to increase self-esteem, educational aspirations and (for some activities) test scores. Furthermore, they found that, although more advantaged students were more likely to participate, 'socially and economically disadvantaged students benefited from ... extra-curricular school activities as much as, if not more than,

... although some activities appear to have a bigger impact than others, it is the range of activities on offer that may make the difference to the individual.

advantaged students', and they therefore advocated 'the development of an exciting programme of extra-curricular activities [which] is likely to benefit all students, but particularly marginal, at risk and disadvantaged students who are least well-served by traditional educational programmes' (Marsh and Kleitman, 2002).

This evidence-based argument for the potential benefits to poorer students of activities which are separate and distinct from school provision concurs with the experiences of practitioners and participants in such activities. For example, the comments below suggest that sometimes separateness from school may seem appealing and be what particularly attracts participants:

Meg Hudson (Scouts): *We do not want to be like school, because kids go to school and hate it and have to do what they are told. We do not want to be like that. ... School is something you have to do, whereas children are choosing to do scouts or to go to centres.*

Rebecca Salawu (Salmon Youth Centre, Bermondsey): *We're structured in that way, but we don't have a standard formal school setting; we're very informal.*

– House of Commons Education Committee, 2001

However, further work is required to explore the relative benefits of school-based and non-school-based activities. Dynarski, *et al.* (2002) found no statistically significant impacts, on either attainment or attitudes, of community learning centres (that is, centres separate from school). It may be that the reason why these findings differ from other evaluations of study support is that, in this case, the support is not taking place in schools.

Although there is some evidence of improved attitudes and aspirations being related to participation – and, therefore, to improved attainment – we do not have a clear picture of the mechanism by which this may occur. However, it does seem likely that, although some activities appear to have a bigger impact than others, it is the range of activities on offer that may make the difference to the individual. Not only do a number of the studies (MacBeath, *et al.*, 2001; Marsh and Kleitman, 2002) find that an improvement in attainment is related to the number of activities in which the student participates but, if locus of control is an important mediating factor, the individual student will need to find an activity at which he/she can be successful.

Summary of findings on effects

Overall effect on educational attainment, aspirations, locus of control and valuing school

In summary, the evidence reviewed above for a range of extra-curricular activities, both academic and non-academic, suggests that involvement in these activities may lead to improved attainment, but it is far from clear how this occurs. There is stronger evidence for improvements in attitudes looked at in this review but how and whether these gains are translated into attainment is not clear.

There is a tendency for some authors and some adults involved with programmes to suggest or assume that aspirations and attitudes mediate such an impact but there is only limited evidence to support this conception (see Table 3).

In general, academically focused activities and study support tend to have a higher impact on attainment than do sports or other non-academic activities.

Although we do not have enough information to calculate comparative effect sizes, it seems likely that study support will have a greater effect than other extra-curricular activities. However, there is also some evidence suggesting that offering a variety of activities may contribute to greater effects on attainment.

Table 3 – Estimated effect sizes for extra-curricular activities

Intervention	Attainment		Attitudes	
	Effect size	Comments	Effect size	Comments
Sport (Marsh, 1993)		No statistically significant impact	0.052	Significant at 1%: impact on attendance
			0.057	Significant at 1%: impact on educational aspirations
Extra-curricular (Fejgin, 1994)	0.32	Significant at 5%: participation in sport	0.082	Significant at 0.1%: impact of sport on educational aspirations
	0.92	Significant at 0.1%: participation in academic clubs	0.08	Significant at 0.1%: impact of other clubs on educational aspirations
	0.033	Significant at 5%: participation in other clubs	0.055	Significant at 0.1%: impact of academic clubs on locus of control
			0.043	Significant at 1%: impact of sport on locus of control
Extra-curricular (Marsh and Kleitman, 2002)		No statistically significant impact	0.017	Significant at 1%: educational aspirations
			0.155	Significant at 1%: university applications
Study support (MacBeath, <i>et al.</i> , 2001)		Significant at, at least, 5% (depending on model specification): insufficient data to calculate effect size		Some significant impact: insufficient data to calculate effect size
Extended Schools (LaFrance Associates, 2005)		Significant at, at least, 10% (depending on model specification): insufficient data to calculate effect size		Significant at, at least, 10% (depending on model specification): insufficient data to calculate effect size
21st Century Community Learning Centers (Dynarski, <i>et al.</i> , 2002)		No statistically significant impact		No statistically significant impact
CU (MacBeath, 2011)		Attainment significantly improved at Key Stages 1–3: insufficient data to calculate effect size		Attendance significantly improved: insufficient data to calculate effect size: some qualitative evidence to support improved valuing of school and locus of control

Effects on particular groups

The research on the impact of extra-curricular activities provides considerable detail on differential impacts on different groups, although the US and UK evidence is not entirely consistent. The UK evidence suggests that:

- minority ethnic groups obtain relatively more benefits from study support (and perhaps other extra-curricular activities);
- minority ethnic pupils are more likely to take up study support;
- there are no gender differences in the benefits overall; and
- pupils entitled to free school meals are likely to obtain more benefits from study support (and perhaps other extra-curricular activities) and this finding is consistent with findings in the US.

Therefore, study support, in particular (and perhaps other extra-curricular activities, in general), appears to show some potential for narrowing the gap for more socio-economically disadvantaged and minority ethnic pupils.

Costs and benefits

Although there was little firm evidence that extra-curricular activities can improve educational attainment by means of changing attitudes and aspirations (the focus of this study), it was sufficiently promising in terms of impact on educational attainment to make it worthwhile to review the potential costs and benefits.

Costs

We looked at the costs of providing 10 hours of activity per week over the school year of 39 weeks. Marsh and Kleitman (2002) defined 9.5+ hours per week as being 'moderately active'. The cost of a teacher, including overheads, is £28.46 per hour. If this teacher leads a group of ten students, this will cost £2.85 per student per hour or £28.46 per student per week. Over 39 weeks, the total cost per student will be £1,110 per year. It appears likely that at least two years' participation would be required for an impact to be observed, so the total cost per student would be £2,220.

Benefits

We have only limited information on effect size but it seems likely that it is about 0.033. This effect size is very low and we have no ready way of translating it into expected performance at GCSE. However, an effect size of 0.1 can be translated into a three percentage point rise in the proportion of students gaining 5+ grades A* to C, so it seems unlikely that an effect size of 0.033 would result in more than a one percentage point rise. This implies that for every 100 students participating in extra-curricular activities, there would be one additional student obtaining the 5+ grades A* to C. This would be equivalent to a value of £144,000.

On the other hand, from the limited information available, it could be that the effect size for academically focused extra-curricular activities could be higher. If we take the estimate of 0.09 for these activities, this implies that for every 100 students participating in extra-curricular activities, there would be three additional students obtaining the 5+ grades A* to C. This would be equivalent to a value of £432,000.

Could extra-curricular activities provide value for money?

The cost of providing activities for 100 participants for two years is estimated at £222,000 and the expected value of this investment in sports or other

non-academic activities is £144,000, while the expected value of the same investment in academically focused activities is £432,000. From the evidence we have reviewed, therefore, only academically focused extra-curricular activities appear to provide good value for money. However, this conclusion ignores the potential benefits accruing as a result of the students' improved attitudes and self-image.

Conclusions

- Extra-curricular activities appear to fall into three main categories: non-academic activity-based interventions, study support and multi-strand extra-curricular interventions. There are few robust evaluations of the impact of extra-curricular activities. This review looked at seven studies: four intervention evaluations and three using sophisticated statistical analyses of large data-sets looking at the associations between participation in extra-curricular activities and academic attainment.
- The evidence suggested that involvement in these activities might lead to improved attainment (small effect sizes of less than 0.1) but it was far from clear how this occurred. There was stronger evidence for improvements in attitudes (small effect sizes, though greater than 0.1) but whether and how these gains were translated into attainment was not clear.
- On the whole, academically focused activities and study support tended to have a higher impact on attainment than sports and other non-academic activities did.
- UK research suggested that there were no gender differences in the benefits overall to study support and that minority ethnic pupils were more likely to take up study support.
- Study support, in particular (and perhaps other extra-curricular activities, in general) appeared to show some potential for narrowing the gap for more socio-economically disadvantaged and minority ethnic pupils.

Mentoring

Definition

A mentor can be defined as an experienced and trusted adviser who trains and counsels, and mentoring as the action of advising or training someone more junior. Mentoring as a formal intervention has become widespread and popular across all stages of education and beyond, as part of, for example, youth work, prison programmes, health interventions and work with asylum seekers (Philip and Spratt, 2007).

In schools, children of all ages are involved in considerable numbers as mentees and, in many schemes, as mentors. The principal expected effects of mentoring include:

- reductions in problem or at-risk behaviours;
- academic or educational outcomes;
- career/employment outcomes; and/or
- improvements in social competence or emotional and psychological adjustment.

There are different kinds of mentoring, varying in terms of:

- purpose – general or targeted (i.e. social, academic, employment);
- the model used for the communication (advice giving, target setting, reflective listening); and

-
- the identity of the mentor(s) (peer, teacher, family member, experienced adult, external successful professional).

Specific interventions

Included in this review are six specific interventions: four from the UK and two from the US. Although the literature on mentoring is substantial, most studies were excluded because they did not fulfil all three criteria for inclusion. Indeed, even of those included, some of the variables have only a tenuous relationship with the key attitudes identified for this study.

A study of informally occurring mentoring relationships was also included in the review since it was the only associational study to consider aspirations in a way that could appropriately contribute to our analysis.

Big Brothers Big Sisters (BBBS)

BBBS is a national school-based mentoring programme in the US that identifies pupils at risk and links them with volunteers. The linked pairs are generally expected to meet at least one a week. Volunteers are trained before the programme starts and receive ongoing support.

The evaluation (Herrera, *et al.*, 2007) involved ten BBBS agencies across the US and considered the effects on over 500 young people in more than 70 schools recruited through school referrals (US grades 4–9), by comparing them to matched pairs. The latter would be given a mentor at the end of the 15-month research project. Everyone therefore received the intervention, but the control group got it later.

A range of data was collected on all the young people by surveys at three points over the 15 months from late 2004–6. Mentors, teachers and BBBS staff were also surveyed, and principals, school liaisons and teachers interviewed. A cost survey was administered to BBBS staff in the ten agencies.

In total, the evaluation measured 23 school-related and 8 out-of-school outcomes in seven domains hypothesised to change:

- young people's academic performance (nine outcomes);
- attitudes toward school and learning (five);
- behaviours indicative of engaging in learning (three);
- school-related misbehaviour (four);
- social skills and relationships (seven);
- engagement in risky behaviours (two); and
- overall self-worth (one).

There was an effect at the end of the first academic year, after five months of mentoring, on overall academic performance. There were also effects on aspects that might be seen as related to the valuing of school:

- the quality of class work (correctness, neatness and completeness);
- number of assignments completed (in-class and homework assignments);
- truancy;
- scholastic efficacy – feeling more competent academically; and
- serious behaviour problems at school.

All of these impacts were statistically significant, at 10 per cent or better, although many were modest in size. The authors considered the differential impact of mentoring and concluded that there were few significant differences between groups in terms of the impact of mentoring, although it did appear that ethnic minority groups tended to obtain relatively more benefits from

mentoring. Unfortunately, the authors did not consider differential impacts by socio-economic group.

Although this report is a rigorous and interesting analysis and is indicative of the role that mentoring could play, most reported positive results did not continue into the following school year, partly due to transfers to other schools. However, the study did show that benefits were likely to be higher where the mentoring programme persisted for more than one school year. These results may suggest that it is the quality of the mentoring relationships – assuming that the length of mentoring is associated with a successful relationship – that generates the positive results. In addition, it is worth noting that there is no evidence that mentoring improved attainment through improving attitudes. The analysis simply showed that mentoring was connected with both improved attainment and improved attitudes. However, the measures of attitudes were only loosely connected with those of interest to this review and, indeed, were mainly behaviours rather than attitudes.

Student Mentoring Program

The US Department of Education's Student Mentoring Program provides grants for a school-based mentoring programme. Schools are expected to identify students they consider to be at risk because they:

- lack strong adult role models;
- live in rural or high-crime areas;
- have troubled home lives;
- face academic challenges; or
- are involved in anti-social or criminal activities.

Such students are paired with mentors from community organisations and their partners. The mentors are trained and the pairs are encouraged to meet on a one-to-one basis throughout at least one academic year.

Bernstein, *et al.*, (2009) undertook an evaluation of 32 school mentoring programmes covering 2005–7. The evaluation was based on randomised controls, involving 2,573 pupils in US grades 4–8.

Unlike the BBBS evaluation, this evaluation did not find statistically significant impacts on academic attainment and engagement, interpersonal relationships and personal responsibility, or high-risk or delinquent behaviour for the group as a whole. However, there were some significant impacts for particular groups. There were several positive impacts of the programme for girls, including self-reported scholastic efficacy and school bonding. There was an impact for boys on 'future orientation' but this was not statistically significant. For boys, the mentoring programme affected self-reported behaviour negatively (and with statistical significance). Truancy (i.e. unexcused absence) showed a statistically significant improvement for younger students (below the age of 12).

Formalised Peer Mentoring pilot

The Mentoring and Befriending Foundation (MBF) established this pilot to explore and develop successful practice in UK schools and disseminate the results. Of all those applying, 180 schools were chosen to take part and members of staff in each school received training to facilitate the pilot. The resulting school projects fell into four categories tackling attainment, bullying, behaviour and transition. Over 3,500 mentors and mentees were involved during the first year. The MBF supported the schools with training, advice and web-based resources.

The evaluation (Parsons, *et al.*, 2008) analysed data on 600 matched pairs of mentor and mentees at the start and the end of the year. There was no method of comparing mentors/mentees with other pupils.

There was some indication of a positive impact of peer mentoring on the educational aspirations and attitudes of participants and on their attainment, but the authors freely admitted that it was not possible to be sure that the observed changes were a result of the programme. The report indicated benefits to both mentors and mentees, perhaps slightly more to the former. Mentors perceived positive impacts for themselves, largely in terms of enhancing life skills and being good for their CV. Mentees perceived some benefits to the process – the report included many positive comments – and, overall, the measured expectations of the mentees were generally borne out.

However, the effect of mentoring on attitudes was not always positive. A decline in attitudes closely linked to valuing school was observed for both mentors and mentees although, in general, these declines were small and not statistically significant. The authors' hypothesis was that such a fall is generally observed as pupils get older and it may be that the mentoring resulted in a slower decline. The only significant decline observed was in mentors' 'school identity' (Parsons, *et al.*, 2008). Together with mentor comments that they were developing a sense of responsibility towards their mentee, this perhaps suggests that mentors experienced mentoring in quite individualised terms, as a relationship between themselves and their mentee, which did not link to school expectations. However, in the absence of a control group, it is impossible to come to any firm conclusions.

Changes in academic self-perceptions varied according to how the pupils rated themselves in terms of academic effort and competence. Although none of the results were statistically significant, in general those who originally rated themselves low on this scale were more likely to report improvements. 'There is the suggestion that peer mentoring has the greatest positive impact on those most in need' (Parsons, *et al.*, 2008). However, analysis of the characteristics of participating schools showed that they were lower than the national average in terms of the proportion of free school meals, looked-after children, ethnic minority children and children with special educational needs.

This is an interesting study that comes to conclusions that are similar to other studies of mentoring. However, it must be read as suggestive rather than definitive because of the methodology. A number of factors meant that the methodology did not generate the kind of evidence needed for this review: there was no objective measure of attainment, the study used self-reports from mentors and mentees, and the absence of any kind of control group or comparator did not make it possible to attribute results to the programme.

Aimhigher

This was a national initiative directed at widening participation in higher education in the UK that formally closed in July 2011. Targeted mentoring was a key component of the initiative. Other components included visits to university campuses, residential summer schools, master-classes and open days. The national initiative was delivered through area partnerships that determined the mix of activities appropriate to their own circumstances.

Moore and Dunworth (2011) reviewed the evidence on impact derived from each of the partnerships. This evaluation reviewed the impact of the activities on:

- progression in education and, in particular, into higher education;
- attainment, particularly in terms of GCSE results;
- aspirations for higher education.

Much of the evidence related to Aimhigher as a package of activities but there was some evidence specific to mentoring.

The Aimhigher Kent and Medway (AHKM) partnership undertook an evaluation of the role and impact of mentors (Smith, 2010). The evaluation was both qualitative (including case studies) and quantitative (including analysis of predicted and actual attainment of mentored students against their peers) and involved longitudinal tracking of individual students. Data and information collected for over 1,000 mentees who engaged in the AHKM project during the period 2006–8 were analysed and a tracking study undertaken through to age 18 and 19 years, with mentees who had reached that age as at December 2008. The general findings were that the learning mentors contributed significantly to mentee outcomes such as GCSE attainment, retention and progression beyond age 16.

Key findings were as follows.

- 81% of mentees stayed on in education post-16 compared with 72% on average for partner school students.
- 60% of the mentee cohort achieved five grade A* to C GCSEs including English and maths compared with an average of 31% of all students in partner schools, and over 80% of a mentee cohort achieved higher total GCSE points than their Year 9 estimates compared with 65% in partner schools.
- 97% of learning mentors believed that participation had some impact on their mentees' attitudes to progression and 74% of mentees said that taking part had made them feel more positive about studying in higher education.
- Of those surveyed, 79% of head teachers believed that AHKM mentoring had some definite impact on increasing their students' aspirations, confidence and motivation.

Evidence from other partnerships was also promising. In North Yorkshire, for example, staff in some schools said that Aimhigher had contributed to an improvement in forecasted grades for the cohort. As one assistant head teacher put it: 'The improvement is beyond what would have been expected and this is as a result of their aspirations being raised by Aimhigher' (Moore and Dunworth, 2011).

The impacts reported by AHKM appear to be very large compared with those achieved by the BBBS study. These large effects may be the result of the mentoring taking place as part of a package of activities that reinforced the effects of the mentoring. Moreover, Moore and Dunworth (2011) acknowledged that the evaluations did not generally control adequately for other possible effects on the outcomes.

However, an analysis of the Aimhigher mentee cohort engaged during 2006–8 found that some attention needed to be paid to gender issues. Considerably more females than males were being mentored: 58% females to 42% males (Smith, 2010). It was felt by AHKM practitioners that school staff were more likely to identify females than males due to their attitude (more open and positive to new experiences) and the likelihood that females would positively engage with mentoring provision. In 2008–9, schools and AHKM learning mentors were asked to filter new targeted students from school census data combined with attainment and postcode deprivation data before enlisting school staff to help with background information. Learning mentors were also asked to be aware of an equitable gender split and not to discount male students because of their attitude. To help AHKM learning mentors monitor their selection, any cohort lists which identified an inequitable gender mix were returned to the school for review. In 2008–9, the gender imbalance

74% of mentees said that taking part had made them feel more positive about studying in higher education.

was reduced to 54% of females to 46% of males. Aimhigher was planning to continue to monitor this imbalance.

Time to Read

Time to Read is a mentoring programme that links UK business volunteers with primary schools to promote the fluency, comprehension and enjoyment of reading in children. The evaluation (Miller, *et al.*, 2009), ten years after the inception of the programme, involved a randomised controlled trial of 512 children in 50 schools across Northern Ireland.

Key findings of this research are as follows.

- Positive impacts were found with respect to some reading skills: decoding (0.15), reading rate (0.22) and fluency (0.14).
- There were no statistically significant impacts on reading comprehension.
- Although the effect size on aspirations for the future was positive (0.11) and consistent with earlier work, it was not statistically significant.
- Rather than children's reading skills being dependent upon first increasing their enjoyment of and confidence in reading, the evidence presented here suggests that the two are unrelated. Indeed, if a relationship exists, it may be in the other direction such that improving children's reading skills will lead on to improvements in their enjoyment of and confidence in reading.
- There was no evidence of differential effects according to gender or socio-economic background.

Mentoring and target-setting in a secondary school in England

Younger and Warrington (2009) reported on the evaluation of a programme of mentoring GCSE pupils in a secondary school for ages 11–16. The evaluation interviewed 36 boys and 33 girls who had progressed to further education and who had achieved GCSE grades that were better than expected. It also analysed school level performance at GCSE relative to other schools in the local authority.

Although the average level of disadvantage was the same in the case study school as the average for the local authority, the case study school performed better both in terms of percentage obtaining 5+ grades A* to C (girls: 77.6% in the case study school compared with 59.8%; boys: 81.3% compared with 53.4) and in terms of value added, where the case study school achieved a positive score compared with a negative score for the rest of the local authority. However, the semi-structured interviews with pupils did not always reveal appreciation of the mentoring, even when they expressed surprise at their grades.

The higher grades, however, did not appear to result in academic progression. More students chose the vocational route than was the average for the local authority for those with similar grades at GCSE, with a number of students expressing the view that AS and A2 studies were too difficult. Thus, the mentoring was able to fulfil the narrow objectives of improving GCSE performance, but left untouched the longer-term more nuanced aspirations of the young people involved, such as continuing to advanced education.

Add Health and AHAA

Erickson, *et al.* (2009) carried out a large robust study in the US. The study looked for statistical associations using data from National Longitudinal Study of Adolescent Health (Add Health) and the Adolescent Health and Academic Attainment (AHAA) drawn from 6,819 cases. The data included in-depth interviews with adolescents and their parents, which provided detailed information on child outcomes, family and peer relationships, and school

and neighbourhood characteristics. Add Health used a multi-stage, stratified, school-based cluster sampling design. Included in the sample were students from 80 high schools (both public and private) and a corresponding feeder junior high or middle school. While some minority racial/ethnic groups were sampled in proportion to their size within the US population, smaller racial/ethnic groups were oversampled.

The focus of the study was on the relationship between informal mentoring and educational attainment and showed a statistically significant improvement in attainment. Although the data-set used included one measure of aspirations (wish to attend college), the study treated this variable as exogenous and impacting on the decision to be mentored. It did not explore the possibility that mentoring might affect this aspiration and, through this, educational attainment. The study is important in terms of increasing the understanding of the contexts in which informal mentoring may improve attainment, but sheds little light on the issue of interventions to change aspirations and, thereby, improve the attainment of socio-economically disadvantaged young people.

Erickson, *et al.* (2009) found that mentoring relationships were more likely to form among youths with an abundance of other resources to draw upon – that is, those from more advantaged backgrounds – thereby highlighting the complementary role that mentoring plays for the socially advantaged. The overall effectiveness of informal mentoring was therefore mixed. Mentoring relationships with relatives resulted in more positive educational attainment for advantaged than socio-economically disadvantaged youths. Relatives of advantaged adolescents were most likely to have valuable expertise in education. However, teacher mentors were found to have a substantial impact on the educational attainment of socio-economically disadvantaged youths. Consequently, this research showed that mentoring relationships can contribute to individual educational success and promote both greater equality and greater inequality in society. This study found no additional effects of gender and ethnicity on the impact of mentoring.

How mentoring works

The effectiveness of mentoring on attitudes is part of the wider question as to the effect of different kinds of relationships on children and young people within the different contexts of, for example, school and home. Such a question is beyond the scope of this review, although looking at mentoring is one way to assess the impact of trying to develop particular forms of relationship, and make them available to young people in order to bring about change in attitudes and, perhaps, in attainment.

Some of the appeal of mentoring appears to be the intention of enabling less advantaged children and young people to develop relationships with older, more experienced people in the way that many advantaged children are able to do informally. There are various analyses that draw on ideas of social capital; that is, the social connections and networks that are available to someone. Thus, one effect of mentoring is, potentially, to increase or change the nature of someone's social capital.

There is not enough research that looks at different impacts of particular kinds or models of mentoring to be able to compare the effectiveness of one model with another (that is, in terms of purpose, mentor activity and mentor identity). Indeed, Parsons, *et al.* (2008) found in their evaluation that aims achieved often varied from intention.

It is possible, however, to draw on some of the findings of large-scale research as to the implications of their findings for practice. The research was not sufficiently fine-tuned to be able to specify the kind of practice needed to produce particular outcomes – for example, raised aspirations.

It could only identify those aspects that seemed to be generally important for consideration.

One of the large US evaluations (Herrera, *et al.*, 2007) found that the following were needed across all programmes:

- development of strategies to lengthen mentoring matches within a school year and extend matches beyond one school year, bridging the gap over the summer holiday;
- providing volunteers with the support and ongoing training they need to create effective mentoring relationships;
- in the case of high school volunteers, establishing clear guidelines on how to work with them;
- in order to facilitate continuity in young people's experience, trying to serve many schools within a locality and selecting schools that are supportive of the programme;
- funding the development of programme infrastructure and supports, and pacing growth to ensure that programmes have the support they need to continue their development.

In addition, a literature review carried out for the BBBS (Hansen, 2007) that synthesized a large number of US studies, including many that were robust in methodology, found the following pointers to effective practice:

- training for mentors in relationship building and background on special populations of young people that they may work with;
- specifying expectations for frequency of contact between mentor and mentee.

Successful mentors expect the beginning of a mentoring relationship will be one-directional, with the mentor needing to take the lead. They are realistic about a possible slow response from the mentee in the first year, about changes that will result from the match and they consider even slow progress in the format of the relationship an accomplishment. On the other hand, mentors who begin their relationships expecting to transform their mentee are typically disappointed. The following are likely to be needed:

- support to mentors to get through the challenges;
- monitoring of programme effectiveness;
- careful recruitment, screening and matching;
- parental involvement;
- use of 'relationship quality' as an interim outcome by which to measure which practices are most successful.

Research tends to suggest benefits of mentoring for the mentor as well as the mentee. In fact, a recent health initiative with adult peer mentors and mentees found benefits for the mentors only (see Cupples, *et al.*, 2011). A focus on mentoring for the purpose of benefiting both mentors and mentees would seem a reasonable way to proceed.

Finally, it is worth noting that Parsons, *et al.* (2008) found mentors were 'almost always simply volunteers'. This issue of self-selection needs to be borne in mind when designing interventions.

Summary of findings on effects

Overall effect on educational attainment, aspirations, locus of control and valuing school

Although evidence on the effect of mentoring on educational attainment is relatively easy to find, particularly in the US, evidence on the particular impact of mentoring on the set of three attitudes is less obvious. Indeed, we came across no studies that looked specifically at locus of control as an outcome of mentoring, although some studies were identified that looked at impact on aspirations and valuing school. Moreover, we found no studies that examined the hypothesis that mentoring improves attainment by means of a change in aspirations and/or attitudes.

In any case, the most robust studies appear to agree that, even where the impacts are statistically significant, effect sizes tend to be low. The average effect size found by DuBois, *et al.*'s (2002) meta-analysis of 55 evaluations of mentoring on a range of personal, social, employment and educational outcomes was 0.14. Although this is a small effect, it could be educationally important. The effect sizes of the studies reviewed in this section are summarised below (see Table 4).

In summary, there is promising evidence of mentoring having an impact on both educational attainment and on attitudes and aspirations, but there is little evidence that the improvement in attainment is mediated through the changes in aspirations and attitudes. This is not to say that this change of causality does not exist, but the studies to test it have not yet been published. However, Younger and Warrington's (2009) study suggests that if aspirations are not present, improved attainment may not result in the expected academic progression.

Effects on particular groups

In general, there was some indication that girls and more advantaged young people were more likely to participate in mentoring. All young people appeared to benefit from mentoring but there were some indications that:

- girls benefit more than boys; and
- socio-economically disadvantaged young people benefit more than their more advantaged peers.

However, the studies did not report on relative effectiveness with respect to ethnicity.

There was some evidence that effective targeting requires active monitoring.

Costs and benefits

Although there is little evidence that mentoring can improve educational attainment by means of changing attitudes and aspirations (the focus of this study), it is sufficiently promising in terms of impact on educational attainment to make it worthwhile to review the potential costs and benefits. The BBBS study provides us with the information to make an initial assessment. In addition to the analysis of impact (see Table 4), this study also estimated the costs of the programme.

Costs

Herrera, *et al.* (2007) estimated the total costs of delivering BBBS across ten agencies. All costs were included whether or not they were paid for, with the exception of the time of volunteer mentors. The estimated cost per pupil

Table 4 – Estimated effect sizes for mentoring interventions

Intervention	Attainment		Attitudes	
	Effect size	Comments	Effect size	Comments
BBBS (Herrera, <i>et al.</i> , 2007)	0.09	Significant at 5%: based on teacher assessment	0.11	Significant at 5%: self-reporting of scholastic efficacy
			0.12	Significant at 5%: teachers' assessment of quality of class work
			0.14	Significant at 1%: teachers' assessment of number of pieces of work completed
			0.24	Significant at 10%: teachers' assessment of serious behavioural problems at school
			-0.24	Significant at 10%: teachers' assessment of truancy
Student Mentoring Program (Bernstein, <i>et al.</i> , 2009)		No significant effects		No significant effects
Formalised Peer Mentoring pilot (Parsons, <i>et al.</i> , 2008)		Insufficient information		Insufficient information
AHKM (Moore and Dunworth, 2011)	0.6	Insufficient information to estimate effect size: differences in attainment equivalent to an effect size >0.6		No investigation of impact
Time to Read (Miller, <i>et al.</i> , 2009)	0.15	Significant at 1%: reading decoding		Not significant at 10%: self-reporting of aspirations for the future
	0.22	Significant at 1%: reading rate		
	0.14	Significant at 5%: reading fluency		
Mentoring and target-setting in a secondary school in England (Younger and Warrington, 2009)	0.6	Insufficient information to estimate effect size as standardised mean difference: differences in attainment equivalent to an effect size >0.6		No formal measures of attitudes and aspirations but qualitative data suggest that they were not raised
Add Health and AHA (Erickson, <i>et al.</i> , 2009)		Methodology does not allow easy effect size calculation in terms of standardised mean difference but significant impact observed		Insufficient information to estimate effect size

was on average a little less than \$1,000 – or approximately £666 – per year. It is important to bear in mind the finding that the impact of a single year of mentoring is likely to disappear if the mentoring is not continued. Therefore, we assume that the costs will need to be borne for two years in order to obtain a lasting impact. This results in an estimated cost of £1,333 per pupil.

The major part of the expenditure was on staff. Programme staff (case managers and programme managers) account for 41% of all expenditure, while general agency staff (administrators and finance and development personnel) account for a further 26%. Operational costs (office accommodation, office expenses and overheads such as fundraising, public relations, agency dues and liability insurance) account for 27% while the remaining 6% is due to a combination of materials for programme activities, programme events and programme transportation costs.

There was little evidence of economies of scale but, as might be expected, agencies serving schools further away from the agency had generally higher costs than those whose schools were closer. This implies that mentoring programmes are likely to be more expensive in more rural local authorities.

Benefits

Herrera, *et al.* (2007) estimate an effect size of 0.09 for the impact of mentoring on attainment. Although this impact is quite low, it is worth considering whether this could represent good value for money given the very high value of improved attainment. An effect size of 0.1 translates into a three percentage point increase in pupils attaining 5+ GCSEs grades A* to C (DfE, 2011). So for a group of 100 mentees, three additional pupils would be expected to obtain the higher grades. This would be equivalent to a value of £432,000. We assume that each of the three would not have achieved 5+ grades A* to C in the absence of the intervention, so that the value for each pupil would be £144,000. This is a conservative assumption.

Could mentoring provide value for money?

The cost of providing mentoring for 100 mentees for two years is estimated at £133,300 and the expected value of this investment is £432,000.

Conclusions

- This review looked at six mentoring interventions and a number of other studies including reviews.
- Mentoring interventions could be associated with positive impacts on attainment (effect sizes from 0.09–0.6) but there was little evidence that this impact was mediated by changes in aspirations, locus of control or valuing school. Indeed, there was only one study that reported statistically significant impacts in attitudes (scholastic efficacy, 0.11) and many measures were only loosely linked to the attitudes relevant to this review.
- Mentoring varied in terms of: its purpose, general or targeted (i.e. social, academic, employment); the model used for the communication (advice giving, target setting, reflective listening); and the identity of the mentor(s) (peer, teacher, family member, experienced adult, external successful professional).
- There were some small indications that mentoring could have a relatively favourable impact on more socio-economically disadvantaged young people and could, therefore, have some potential for narrowing the gap in attainment.
- Some of the impacts noted in the UK studies had fairly large effect sizes but these studies suffered from the lack of an adequate control group.

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- However, even using the relatively small effect size from a US study (which had an adequate control group) and comparing the value of the potential change with its reported costs, we found that effective mentoring interventions could provide good value for money.

Volunteering and peer education

Definition

A volunteer is defined by the *Oxford English Dictionary* in two related but different ways:

- 'a person who freely decides to take part in an enterprise ...'; and
- 'a person who works for an organisation without being paid'.

The interventions reviewed in this section cover both definitions. In some cases, there is doubt about what 'freely decides' means in the context of children and young people in school-based volunteering.

Although volunteering has taken place throughout history, volunteering as an intervention is a relatively new idea. Indeed, there has been a growth in youth volunteering in recent decades. Part of this increase is probably due to the perception that volunteering improves employment-related skills.³ For this reason, we have also included peer education in this section. Although peer educators may receive payment, their work depends on their age and so cannot in itself be a lifelong career. The skills acquired will need to be transferable.

There have been government reviews (including the Russell Commission in 2005 and the Morgan Inquiry in 2008) and funded support for specific projects designed to promote volunteering, based on the understanding that participation can help to improve self-confidence and lead to increased employability. While aspirations are not always mentioned explicitly, it is implicit in much of the volunteering literature that by gaining greater confidence and acquiring new skills, young people will aspire to further or higher education and/or employment. Hill, *et al.* (2009), in their review of youth volunteering, concluded that young people get many benefits from volunteering including gaining new skills and qualifications, a boost in self-esteem and a perception that their employability has been enhanced. Volunteering is one of the few interventions where the link between aspirations and employment prospects can be seen, as young people gain more skills, become aware of more opportunities and then widen their view of employment. More evidence is needed as to whether employment is actually enhanced as a direct result of volunteering. There have been two national government-funded projects to promote youth volunteering in recent years, the MV initiative and the ACIS pilot, evaluations of which showed promising results.

We found a few evaluations of young people's involvement in various kinds of volunteering in which attitude change, including the set of three attitudes in which we were interested, was considered, and for which there was evidence of skill development and other educational attainments. There is an emerging area of volunteering – young people's involvement in the commissioning of services in local authorities (Davis, 2007) – but we found no studies that met our inclusion criteria. There is a view that such involvement is the right of young people, which is not always considered consistent with the measuring of impact.

Specific interventions

Millennium Volunteers (MV)

This initiative was designed to encourage volunteering by 16–24 year olds, based on nine key principles: personal commitment, community benefit, voluntary commitment, inclusiveness, ownership by young people, variety of opportunity, partnership, quality of opportunity and recognition.

The first phase of its evaluation (Institute for Volunteering Research, 2002) focused primarily on the views of the project managers and co-ordinators from the MV projects funded in the first year of the programme. Qualitative telephone interviews were undertaken with a total of 130 projects across all four countries of the UK. This sample represented 34% of all first-year projects. However, if Wales is excluded, the sample in the other three countries is 89%. Wales is remarkable for its exceptionally large number of projects (260) rather than a low number of projects in the sample. From the telephone sample, 21 case studies were selected to represent different kinds of delivery methods across a range of criteria, including geographical spread, income, number of volunteers and organisational type. For each case study, interviews (individual and group) were conducted with the project staff, with staff of other relevant local volunteer-involving organisations and with the MVs themselves; 20 policy-makers and programme managers were also interviewed.

In terms of personal development, participation in MV proved a huge boost for many young people. Results from the impact audits show that 84% of MVs agreed that through being an MV their confidence had increased. Similarly, 78% said that since becoming an MV they were more willing to try new things, 78% said that they were happier meeting and mixing with others, and 80% felt that they were more aware of the needs of others.

Regarding career development, 60% agreed or strongly agreed that MV had helped to develop future career plans and 65% agreed that MV had increased their chances of employment. The young people who took part felt that participating in MV had increased their chances of employment, and about 60% said that they had developed transferable skills such as team working and communications. Other benefits included skills development, finding out about future career options and increasing feelings of self-worth. The evaluators suggested that for those young people who had been socially excluded, even a small gain in self-esteem or confidence had a significant impact. Although the report stated that participation in MV improved routes to further education, no evidence was provided.

Although there was evidence on self-reported changes in attitudes on the part of the MVs, there was no control group, nor any other method of isolating the effect of the programme. Moreover, although there were self-reported perceptions of changes in employability and future educational development, there was no objective evidence of these impacts.

Active Citizens in Schools (ACiS)

This pilot project built upon the MV initiative and enabled younger people (aged 11–15) to volunteer in a range of activities through their school, based on three main areas:

- themes and campaigns;
- school-based projects; and
- community-based projects.

The volunteering opportunities offered were of high quality and young people were offered effective support. The project was based on the same nine key

principles as the MV initiative: personal commitment, community benefit, voluntary commitment, inclusiveness, ownership by young people, variety of opportunity, partnership, quality of opportunity and recognition.

The evaluation (Ellis, 2005) took place over two years from 2002–4 and involved questionnaires and telephone interviews to volunteer projects in 27 schools and case studies in 10 of the schools. Baseline and impact questionnaires were administered to 358 and 205 volunteers respectively. The report suggested that girls, British white children, and more able children were over-represented in the evaluation and in the project, but no clear data was available. Young people were involved in ACiS for 1–36 months, with an average duration of twelve months. On average, the respondents had volunteered for 42 hours (when three outliers were excluded), although this varied from 2 hours through to six respondents who said they had undertaken more than 200 hours of volunteering.

The benefits for young people identified were similar to those in the MV initiative and included a gain in self-confidence and increased awareness of the needs of others, enhanced skills development, and a sense of pride in their attainments.

- 79% of respondents felt that they had gained in confidence.
- 84% felt more aware of the needs of others.
- 89% felt their team working skills had improved.
- 73% felt they were better at getting their point across.
- 55% felt that involvement in ACiS had helped them with their career plans, both in terms of what career they might like to follow in the future and understanding how they might work towards their future career.

Schools felt that the project improved behaviour in the school and enhanced relationships between pupils and staff. However, again, although there was evidence on self-reported changes in attitudes on the part of the ACiS volunteers, there was no control group, nor any other method of isolating the effect of the programme.

Raleigh International Trust overseas expeditions

This intervention is an intensive ten-week volunteer overseas expedition with community, environmental and conservation projects around the world. There are three types of participants:

- 'self-funders': young people from the UK who fundraise approximately £3,000 to go on the expeditions;
- young people from socio-economically disadvantaged backgrounds in the UK who fundraise for less money (usually around £500);
- young people from the host countries, and international venturers.

About 10% of the 1,600 participants since 1984 have come from socio-economically disadvantaged backgrounds.

An evaluation of the Trust's work with these socio-economically disadvantaged young people (Sheldon, *et al.*, 2009) involved:

- an online and postal survey of 105 past Raleigh participants;
- 15 life history interviews, with people aged 22–40 at the time of interview.

There was no comparison with people from non-socio-economically disadvantaged backgrounds, nor with a control group of similarly socio-economically disadvantaged young people.

When surveyed, 83% of respondents said that Raleigh had a major impact on their career ambitions and interests, 79% said they had a greater sense of control over their life as a result, 88% said that it had had a major influence on their ability to communicate. They said that Raleigh had had a lesser impact on their vocational skills as opposed to their interpersonal skills.

Peer education: ESPERANZA

The peer education intervention, ESPERANZA, evaluated by Ashcraft (2008) involved 14 peer educators (PEs), aged 16–21, supervised by two adult facilitators. They were recruited to the programme during small-group interviews, and once appointed were given 20 hours of training in the subject area of sex education. They were then supported by adult workers in distributing information among schools, friends and acquaintances by delivering workshops, presentations and theatrical performances all on sex education, for which they received some payment (at just above the federal minimum wage).

Evaluation was by ethnographic research. This included 160 hours of observations and interviews, 65 hours in meetings and training, 15 hours' observation in other informal occasions, interviews with the two adult facilitators, the 14 PEs, the director, and, finally, focus groups with the PEs. The PEs were diverse in terms of ethnicity and academic success: one-third were average or above average students, one-third had significant difficulties with school, and one-third placed themselves in the at-risk category.

This evaluation is one of the few that provided details on the PEs' experience of changing attitudes and their educational attainment and personal recognition of that learning. Personal gains over time to the PEs were substantial and included: knowing things that others do not know, being intrigued about the subject matter, using the information to help people, improved relations with family, and gaining respect from their family by being seen as someone who has important knowledge.

The following quote exemplifies the diversity of response, in respect of the impact of the intervention upon feelings and attitudes, and attainments. It also suggests an order that is less straightforward than 'a change in aspirations leads to a change in educational achievements':

I had an auntie ... who really didn't think I knew much of anything and then one day we were sitting at a family function and somebody said something about an STD and I said, "Well, that's not true." And everybody stops and looks at me and goes, "Well how do you know?" ... That was when my whole family found out what I do ... and then everyone goes, "[Her mom's name], why do you let her work there?" My mom was like, "She taught y'all something!" So ... yeah, my sister's the nurse ... my aunt ... called her every time something was wrong. ... So [now] it was like, I'm the peer educator. I know all about the sex stuff. And so they're like, "Yeah? And what about this stuff?"

– Ashcraft, 2008

Attitudes are implicit to this peer educator's experience, but do not appear separate from the context in which they are expressed. The contextual nature of attitudes is shown repeatedly in this evaluation.

In addition to changes within the family, and in PEs' relationships with authority figures, the intervention affected the PEs in complex ways at school. PEs found they had greater respect from their peers at school. Some PEs started feeling and liking being trusted, and found a niche at school for the first time. They enjoyed sharing knowledge with others and found they were fostering social connections. In many of the project actions, they were helping

The project in effect gave them mentoring from the adult facilitators, bringing access to role models, meaningful work and social and cultural capital, thus helping them to see real reasons for staying on at school.

to create for themselves and others a sense of community and belonging, reducing isolation.

Educational achievements were also substantial as PEs became skilled in many areas such as developing research and writing skills, delivering presentations to different audiences, putting together proposals (such as for a conference), learning collaborative and communication skills, organising information, learning pedagogical skills, negotiating presentations with co-presenters, and problem solving.

The educational skills gained in this intervention also included discussing and evaluating research, undertaking personal development training, developing creative writing and drama skills, and designing surveys. PEs were experiencing themselves as capable of learning and succeeding, and being a PE helped to confront barriers to academic success. Several PEs became re-engaged with school, or applied to go to college (and were accepted) as a result of this intervention. The project in effect gave them mentoring from the adult facilitators, bringing access to role models, meaningful work and social and cultural capital, thus helping them to see real reasons for staying on at school.

The activities and the experience of the project contrasted strongly with other work they were doing, such as paid work, and left them disillusioned as to what their future might hold, but it enabled them to redefine their abilities and re-imagine possibilities for their lives. In other words, the project had an impact on their expectations.

This particular example of peer education provided one of the few reports in which there is clear evidence of changed aspirations of the participants feeding through into raised attainment in the form of increased involvement in education and developing language skills. Most reports about peer education have tended to focus on the success of it as a method of educating young people about the topic in question, as opposed to its impact on a range of other skills or attitudes of those involved carrying out the educating.

It is notable that although the PEs in the programme were volunteers, they tended to have volunteered because they (and others) identified themselves as risky types who knew about teenage sex. This means that there were less likely to be the usual problems of self-selection, where the volunteering young people tend to be relative high achievers or good citizens. It appears to have come as a genuine surprise to many of the participants that they were able to do the peer education. The author observed how being a peer educator enabled them to 'move from self-described "sex-crazed" to "sex-smart" teens and how this shift transforms their identities and their relationships with parents, authority figures, and peers' (Ashcraft, 2008).

Ashcraft's findings were similar to those in other evaluations of peer education projects. While most of the focus of other evaluations was on the target group to be educated, a number of evaluations have pointed out the impact on the PEs. Harden, *et al.* (2001) reported that: 'There was general agreement among PEs that being a peer educator had provided them with a valuable opportunity for personal development.' However, we have found no quantitative evaluation of such impacts.

How volunteering works

We found no quantitative evidence that volunteering/peer education 'works' in terms of educational attainment, but there was some evidence that participants gained new skills. There was better evidence that volunteering/peer education improved both the aspirations and attitudes of participants. Ashcraft's (2008) analysis provided us with some insight into the interactions between these impacts.

Aspirations were complex, and were enmeshed with widening opportunities, other attitudes and the feeling of competency:

... just helped open new doors for me, it's shown me different directions I could take, different resources I know I have now that I didn't before. It's helped me to learn to speak to people better like on a one-on-one level, like professionally. ... It's definitely helped with like the professional aspect ... just being able to sound like you know what you're talking about. ... It's just been really good to get to meet people, connections ... that can help later on in life or whatever.

– Ashcraft, 2008

All of the attitudes that are the focus of this review can be identified in this study. Similarly, the PEs were shown to have developed educational skills. While these attitudes and achievements seem to result from the intervention, there is no sense of linearity in the way that they develop. For example, there is no sense that attitudes change first, leading to a change in achievement. In a number of cases, the skills development preceded the change in attitudes and aspirations.

Key factors emerging from these studies appear to be that volunteering is more likely to deliver positive impacts if:

- the volunteer receives adequate training and preparation;
- the volunteer receives ongoing support during the placement; and
- the task is one in which the volunteer is able to be successful but is difficult enough that he/she is surprised at that success.

There is some evidence that engaging socio-economically disadvantaged young people in volunteering/peer education is more successful if the tasks fit their own interests. This was certainly the case with the young people studied by Ashcraft (2008). Similarly, a study of ethnic minority young men in Wales (Basis Research Consultancy, 2008) concluded that they were more likely to volunteer in projects that:

- often were linked to their ethnic, religious or faith communities;
- were linked to sports activities; and
- recruited them through word of mouth or by personal contacts.

Summary of findings on effect

Overall effect on educational attainment, aspirations, locus of control and valuing school

Our review found no quantitative evidence of impact on educational attainment scores, on other educational outcomes (for example, attendance) or of impact on employment rates of young people as a direct result of volunteering. However, there was some evidence in research on volunteering, in particular in the involvement of PEs in sex education, of an impact on educational skill development and on engagement in education as a result of a change in the set of three attitudes.

However, none of the studies we reviewed had a sufficiently robust methodology for us to describe these results as anything other than indicative. Moreover, even where quantitative methods were used, the reports contained too little information for us to attempt an estimation of effect size.

On the other hand, some of the qualitative information provided some interesting insights on the linkages between attainment, aspirations and attitudes.

Effects on particular groups

Although some of the interventions were targeted at socio-economically disadvantaged groups, there was little systematic study of the differential impacts on particular groups.

However, general reviews of volunteering found that socio-economically disadvantaged young people and young men (and boys) tended to be under-represented, but that where there was a strategy to engage them, there was evidence that they perceived clear benefits.

Costs and benefits

Because of the lack of quantitative data on impacts, a full cost–benefit analysis cannot be carried out. The evaluation of the MV projects for England attempted a cost–benefit analysis and concluded that they offered good value for money. However, the analysis did not take into account the costs and benefits to all parties; rather, it only attempted to estimate the benefits to the organisations receiving volunteer inputs, measuring these benefits as the value of the total hours of volunteer time they received. Not only does this not value the benefits to the volunteers (the focus of this study) but there are reasons to believe that it may overstate the value to the organisation (because the volunteer requires more management and supervision than a paid worker) or understate the value (because the volunteer is more enthusiastic than a paid worker and, therefore, more productive). Moreover, the costs in the analysis included only the programme costs covered by the funding from the MV. It did not include, for example, the costs of the self-funded delivery partners.

A valid cost–benefit analysis must wait until robust quantitative data on impacts is available.

Conclusions

- This review looked at four intervention studies and a number of reviews dealing with youth volunteering.
- There was robust qualitative research evidence from a particular peer education intervention of impact on educational skill development and on engagement in education as a result of a change in the set of three attitudes. The detailed ethnographic study gave some understanding of how attitudes were changed and how this led to educational achievement.
- All relevant studies of volunteering and peer mentoring were based on qualitative research. In particular, there was no attempt to obtain objective quantitative measures of educational attainment or employability. There is a need for some robust quantitative research in this area.
- It may be the case that volunteering impacts on attitudes and attainment but the research has not been carried out to look at this. With one exception, there is little evidence that volunteering improves employability and educational outcomes by changing attitudes.
- Socio-economically disadvantaged young people and young men in general tend to be under-represented, but where there is a strategy to engage them there is some indication that they perceive clear benefits. There was a widespread belief that volunteering could be particularly helpful for less advantaged young people, but we found no studies that tested this belief robustly.

Interventions with a primary focus on changing attitudes

Definition

This review found a number of interventions of which the main focus was attitude change. They are included in order to examine whether there is evidence that setting out to change attitudes, through a deliberately focused set of activities, can indeed change those attitudes and in doing so can impact on attainment. Although most of these interventions could also be regarded as extra-curricular activities and were often delivered at school, very much like another intervention area in this report, they are analysed here as a separate group. They contrast with traditional extra-curricular activities, which have as their main focus some other aspect of learning, skill or development so that attitude change is found to be an outcome or is generally regarded as a secondary focus. For the interventions reviewed in this section, attitude change of one kind or another was the prime objective.

Most of the interventions considered here did not always target one of our set of three; they targeted other attitudes. However, they were only included if there were attempts to measure impact on both attitudes and educational attainment. In spite of their not meeting our criteria, we thought it worthwhile including them because of the relative absence of our three key attitudes in the other intervention groups. We thought that a review of such studies might provide an important test case for the idea of achieving changes in attitudes through a deliberate intervention. Furthermore, given the difficulty in defining aspirations, locus of control or valuing school as entities to be changed, it was worth looking at the attitudes for which there was evidence of impact from particular targeted activities. It may be that these attitudes come to be seen as having some relationship to our set of three, and it is possible that other patterns or issues may emerge.

We have included four interventions of this type in this review. We have also reviewed the evidence from a meta-analysis of US after-school interventions that aimed to promote young people's personal and social development (Durlak, *et al.*, 2010) and an outline of ongoing promising work in the UK. The four interventions were included even though only two of them made any specific assessment of aspirations, locus of control and valuing school. 'Go for it!' and 'It's up to me!' (Hughes, *et al.*, 2006a; Hughes, *et al.*, 2006b) were related interventions aimed at different age groups with the objective of changing aspirations. SEAL (Humphrey, *et al.*, 2008) looked to change self-efficacy (similar to locus of control). AERO (Doel, 2009) used a school social work service to bring about attitude change in young people.

Specific interventions

The four interventions were recent UK initiatives directed at children who were struggling in school.

AERO (Aspirations, Encouragement, Realism and Openness)

This programme used a school social work service to increase self-knowledge, awareness of others, release of feelings, focus and choice in young people by providing one-to-one support to students, and was aimed at students experiencing problems at home or school. The intervention in South Staffordshire was delivered to 153 students in one school. The young people were helped to make plans and carry them through.

The evaluation (Doel, 2009) involved:

- twelve (randomly selected) students currently in the school who had experienced the AERO method;
- six professionals; and
- one parent.

Findings from interviews suggested that the AERO project had increased young people's self-knowledge, and made their problems more manageable. Exclusions at the school were quoted as changing – reduced from 251 to 6 in three years – but it was not clear whether this referred to permanent or fixed-term exclusions, or how clearly this reduction could be attributed to AERO. (Unfortunately, there was no comparison of the change in exclusions from other schools over the same period.) There was no direct evaluation of any impact on attainment.

Again, the methodology does not allow us to come to a clear conclusion, but the apparently large fall in exclusions suggests that it might be worth considering this approach to improve behaviour, which could result in improved attainment.

'Go for it!' and 'It's up to me!'

These school-delivered programmes of lessons for students at Key Stage 4 and Key Stage 2 were intended to boost educational self-perceptions, motivation and aspirations, through units 'based on an eclectic mixture of ideas', including 'locus of control' (Hughes, *et al.*, 2006b; Hughes, *et al.*, 2006a). Unusually for this sort of intervention, it was delivered across whole year groups during normal lesson time in schools in Stoke-on-Trent.

The evaluations considered self-esteem, aspirations and attainment, with repeated measurements taken of all three elements. Year 4 ('It's up to me!') students from six primary schools and Year 10 ('Go for it!') students from five secondary schools were given a battery of psychometric tests before and immediately after the programme, and six weeks later. The same tests were given to a control group, consisting of a similar number of people at control schools who were not given the intervention. A range of background information (indicators of free school meal eligibility, a rough estimate of household economic status and cultural capital scores), and measures of academic attainment were obtained for each student from school records.

These evaluations were particularly interesting for our purposes because there were three research questions:

First, is there evidence that self-esteem and self-efficacy, independently of ability, explain some of the variation in GCSE results? Second, is there evidence that the ['Go for it!'] intervention results in improved self-perception? Third, is there evidence that the ['Go for it!'] intervention results in improved academic performance (as measured by GCSE results) and/or elevated academic aspirations?

– Hughes, *et al.*, 2006a

These three questions are directly pertinent to our study.

This was a statistically robust evaluation. It was also methodologically robust, except that no information was given as to the appropriateness (in terms of content, theory, etc.) of the psychometric measures for the intervention. The evaluation found that self-efficacy correlated with aspirations, but that neither appeared to be affected by the programmes, while attainment correlated with self-efficacy but was also barely affected by intervention. Only 'It's up to me!' delivered statistically significant impacts on attainment, but these were very small and in the case of Key Stage 2 maths, negative. It was suggested by the

evaluators that the programmes in their current form do not deliver their intended effect. There was, however, evidence that a majority of students enjoyed the intervention, and perceived it as useful.

SEAL (Social and Emotional Aspects of Learning)

SEAL is a national programme in England that was rolled out to all schools and by 2008 it was thought to be implemented in 80% of primary and 20% of secondary schools (Humphrey, *et al.*, 2008). There were three waves of intervention to develop self-awareness, motivation, emotional literacy, self-regulation, empathy and social skills:

- a whole-school approach for all pupils;
- small-group interventions for children who were thought to require additional support; and
- one-to-one interventions for those who had not benefited from waves 1 and 2.

A robust evaluation of SEAL (Humphrey, *et al.*, 2008) focused on wave 2 interventions and used mixed methods, one part of which was a semi-experimental evaluation of four different small-group approaches. There was no investigation of any impacts on attainment.

This showed mixed results, but there were some statistically significant improvements in a small number of the many measures taken in the four small-group approaches that were evaluated using quantitative data. Such effects included self-efficacy (related to locus of control), self-regulation and empathy, and there was a small mean effect size for some of the different measures in two of the four groups, implying that the particular programmes in those two groups achieved that overall effect size in terms of attitudes.

Ongoing UK work

There were examples of projects which did focus explicitly on aspirations and valuing school, and one was a project sponsored as part of London Challenge, entitled 'Re-engaging disaffected pupils in learning'. This intervention looks promising in terms of the elements of delivery reported, but to date no impacts have been reported. This initiative involved 60 pupils in five London secondary schools between 2004 and 2006. It aimed to raise student aspirations and self-esteem in ways that would have a positive impact on their engagement in learning and attainment. Research tools were also given to school staff to enable them to gain greater insights into the lives and experiences of the children and young people they were working with. Pupils were actively involved in the direction of the project. An outdoor learning experience and the working together of pupils, parents and teachers were also features of the intervention. Although attainment data was not available at the time of this review, the project showed many examples of re-engaging disaffected students in their learning and of the expression by pupils of views about how much they valued learning and being actively listened to (Riley, *et al.*, 2006).

Review of US studies

Although some of the UK evaluations indicate some positive effects, they do not generally provide enough information to consider this issue. However, a meta-analysis by Durlak, *et al.* (2010) of 68 US after-school schemes which aimed to promote young people's personal and social skills came to a more positive conclusion. This review considered impacts on a range of self-perception measures, various social behaviours and school attainment. The

outcomes were broadly positive on all the measures, though the effect sizes were quite small.

The authors argued that if the programmes were categorised according to their SAFE system (schemes which appear to be sequenced, active, focused and explicit in their intentions), SAFE programmes achieved consistently better results than the other schemes. Significant increases were found in young people's self-perceptions, bonding to school, positive social behaviours, school grades and attainment test scores. Durlak, *et al.* (2010) found an average effect size of 0.12 on school grades for all included studies and of 0.2 for SAFE programmes. The findings of their review suggested that programmes prioritising attitude change and development might impact on attainment, but that causality was not possible to conclude with any certainty, given the lack of detail in the review.

This review gives further evidence that interventions that focus specifically on attitudes are possible, but does not give any evidence of specific impact on the set of three attitudes in which we were interested. Nor does it offer guidance on how such interventions might be implemented in the UK context.

How interventions with a primary focus on changing attitudes work

In terms of having an impact on attainment, none of the four interventions examined here can be shown to 'work', with the exception of the small impacts observed in 'It's up to me!'. There is robust evidence that SEAL had an impact on attitudes, but these attitudes are only loosely connected with locus of control and/or valuing school. For the other evaluations, a positive impact on attitudes was at best only suggestive because of the lack of a robust evaluation methodology.

The interventions were all very different in approach, including, for example, weekly sessions, input from a social worker, and a strategy integrated more generally into school. Regular sessions in groups seemed to be the more common strategy. However, it is difficult to draw more general conclusions.

For the totality of the population, a more sensible strategy for raising learners' aspirations and self-confidence may be to avoid separating these ideas from experiences of attainment. As the evaluators of 'Go for it!' and 'It's up to me!' comment: 'traditional methods of developing self-efficacy – praising students when they get something right – may be more effective' (Hughes, *et al.*, 2006c).

It is worth considering their conclusions in detail:

The most likely explanation for a failure to find benefits of ['Go for it!'] and ['It's up to me!'] is that the programmes in their current form do not deliver their intended effect. The interventions are based upon the psychological principle that having high self-esteem and/or self-efficacy has, independently of ability, a direct effect on performance. However, it is unclear from the literature whether an intervention that is directly targeted at students' self-perceptions, through strategies that are independent of their academic work, will result in increased self-efficacy or self-esteem. Self-efficacy, in particular, tends to develop as a result of students being aware of their own good performance in a particular area. Therefore, traditional methods of developing self-efficacy – praising students when they get something right – may be more effective.

– Hughes, *et al.*, 2006c

Summary of findings on effects

Overall effect on educational attainment, aspirations, locus of control and valuing school

Evidence that relates specifically to impact on the set of three attitudes that are the focus of this review is barely visible. There was only one set of interventions, 'Go for it!' and 'It's up to me!' (Hughes, *et al.*, 2006a; Hughes, *et al.*, 2006b) that aimed to raise aspirations, and one other, SEAL (Humphrey, *et al.*, 2008), that aimed to raise self-efficacy (related to locus of control). There was no evidence that aspirations changed as a result of the 'Go for it!' and 'It's up to me!' programmes. Only 'It's up to me!' recorded statistically significant impact on attainment.

Given the results of the American meta-analysis, the failure to find effects on relevant attitudes or on attainment in the UK may seem surprising. It seems important, however, that the 'Go for it!' and 'It's up to me!' interventions were delivered to all students, while it is not clear to what extent the other reviewed schemes were targeted at particular parts of the population. The fact that the reviewed schemes were run out of school time also introduces the issue of self-selection, since it is not clear how participants were incentivised to attend. The impact of self-selection is strongly suggested by the finding that 'attendance was a problem for several programs. For example, youths' attendance ranged from 15 to 26%' in the eleven studies where it was reported (Durlak, *et al.*, 2010).

The information on effect sizes for the UK studies and for Durlak's SAFE programmes was summarised (see Table 5). However, it is not possible to make any suggestions from research as to the model of working within those sessions most likely to bring about attitude change.

In summary, there was evidence from a few of the UK interventions that attitudes might be changed but the evidence was not always very robust. The usual form of work was with groups of vulnerable children. Effectiveness varied but there was some good evidence that particular programmes could be effective, particularly for individuals whose self-esteem seemed very low. Whether this provides any evidence for it being possible to carry out interventions to change aspirations, locus of control and valuing school depends on whether we can assume that there are conceptual links between the very varied attitudes and dispositions sought in the interventions and our set of three attitudes.

There is less evidence of this sort of impact across the wider population. Moreover, there is no UK evidence of these sorts of changes in attitudes leading to effects on educational attainment. In terms of how far along the chain of evidence interventions lead to attitude change (in children and parents), which then leads to attainment change for poorer children, we have found evidence of interventions impacting on attitudes that seem related to locus of control, at least for some of the population, but no evidence for a subsequent effect on educational attainment.

Effects on particular groups

The UK interventions were mainly aimed at specific subgroups of students who were clearly having problems. However, with the exception of 'Go for it!' and 'It's up to me!', where there appeared to be a slightly more favourable impact in the case of pupils with special educational needs, there was no indication of why an intervention might be particularly helpful to this group.

Table 5 – Estimated effect sizes for interventions that have a primary focus on changing attitudes

Intervention	Attainment		Attitudes	
	Effect size	Comments	Effect size	Comments
AERO (Doel, 2009)		No evaluation of attainment effects		Some apparent impact on exclusions but insufficient information to calculate effect size
'Go for it!' (Hughes, <i>et al.</i> , 2006a)		No statistically significant evidence of impact		No statistically significant evidence of impact
'It's up to me!' (Hughes, <i>et al.</i> , 2006b)		Ambiguous results		No statistically significant evidence of impact
SEAL (Humphrey, <i>et al.</i> , 2008)		No evaluation of attainment effects	0.44	Significant at 5%: impact of New Beginnings
			0.35	Significant at 5%: impact of Going for Goals
Meta-analysis (Durlak, <i>et al.</i> , 2010)	0.22	Significant at 5%: grades	0.37	Significant at 5%: child self-perception
			0.25	Significant at 5%: school bonding

None of these interventions considered impact on socio-economically disadvantaged participants, and neither were impacts on the basis of gender or ethnicity considered. There was no consideration of appropriateness of any of the interventions for children from any particular group.

Costs and benefits

The interventions discussed in this section vary too widely for us to be able to estimate typical costs and benefits.

In any case, in the UK, we have no credible evidence of an impact on educational attainment and there would be little point in estimating the costs of such programmes because there are no benefits to compare.

In the US, we have no detailed information about the method of delivery for the programmes examined in the meta-analysis. Thus, although we could estimate the value of the potential benefits, we do not have costs to compare with them.

Conclusions

- A number of interventions had a change in attitudes as their primary purpose. This differed from other intervention areas in this review, in which attitude change was an indirect intention by involvement, for example, in mentoring or extra-curricular activities. This review looked at four such evaluations.
- These interventions had an impact on attitudes but showed little evidence for a subsequent effect on educational attainment. However, in the UK such impacts have been difficult to identify and, when they exist, they tend to be small and contradictory.
- Evidence that relates specifically to impact on the set of three attitudes that are the focus of this review was barely visible: we looked at only one set of interventions that aimed to raise aspirations, and another that aimed to raise self-efficacy (related to locus of control).

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- Interventions were generally targeted at children with difficulties. There was no evidence of the extent to which such interventions could contribute to narrowing the attainment gap.

3 CAN INTERVENTIONS CHANGE EDUCATIONAL ATTAINMENT BY IMPACTING ON ATTITUDES?

This research looked at whether there are interventions that could be scaled up to address the attainment gap for socio-economically disadvantaged children and young people by changing a particular set of attitudes.

A review of interventions did not find any attitudes that could be classified as 'effective', that provided evidence of impact both on attitudes and on educational attainment, and a direction of influence from attitude to attainment. Promising interventions were found for which there was evidence of impact both on attitudes and on educational attainment, but for which evidence of the direction of influence was lacking. In other words, it was not clear that educational attainment was mediated by impact on attitudes. Such promising interventions were in the areas of parent involvement, mentoring, extra-curricular activities, and peer education. The question, therefore, is what can be made of the review findings? This section looks into the findings across all the areas, at implications and indeed explanations, drawing on some contextual research literature. Tentative recommendations are made for policy, practice and research.

The observation of very limited effects on the set of three attitudes can be interpreted in a variety of ways, each with different implications for policy and practice.

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- It may be that these attitudes are not the mechanism by which disadvantage is translated into higher attainment, in which case we should look for different avenues for action.
 - It may be that these attitudes do not need to change, and that the associations in the original data from Goodman and Gregg (2010) between attitudes and attainment at different income levels are explained in other ways. Rather than raising aspirations and changing attitudes, it may be that attainment needs to be supported in other ways.
 - Finally, it may be that the attitudes are indeed central to the attainment of change but that the research has not yet been carried out to demonstrate this.

We look at these in turn, in the course of the following discussion.

Are interventions effective in raising educational attainment through the mechanism of attitude change?

We found evidence of impact – albeit very small – on the set of three attitudes and, in the same interventions, evidence of impact on different kinds of attainment. Even small effect sizes can have important educational effects. Statistically significant effect sizes for educational attainment and (respectively) the set of three attitudes were found for:

- parent intervention (0.17–0.45 and 0.24–0.66);
- mentoring (0.09–0.22 and 0.11–0.24); and
- extra-curricular activities (0.032–0.092 and 0.043–0.155).

However, there was no evidence as to mechanisms or direction of change. It was as likely that attitudes were changed as a result of raised attainment as the other way around. There was barely any evidence to confirm a chain of impact from attitudes to attainment. The only exception was the small-scale ethnographic peer education intervention project (Ashcraft, 2008), which documented qualitative impact on educational skill development and on engagement in education as a result of a change in aspirations, locus of control and valuing school. This was the only research project in which a chain of impact from our particular set of three attitudes to attainment could be observed. However, attributing change to the set of three attitudes alone (rather than other attitudes and behaviours), and indeed to the intervention itself, was problematic.

Raising attainment is not always straightforward and there is much interest in whether indirect approaches such as changing attitudes could be effective. We did not find any convincing evidence to support this possibility with respect to the set of three attitudes.

Despite limited information from evaluations, a cost–benefit analysis found evidence of value for money in the areas of parent involvement, extra-curricular activities and mentoring. The lack of evidence that impact on attainment is mediated by changes in our set of three attitudes means that there is no case as yet for scaling up of the interventions that we investigated on the basis that they will improve outcomes by changing these attitudes. However, there may be other reasons to scale up these interventions. For instance, we found impacts in all these intervention areas on outcomes and attitudes and behaviours, even if the direction of change did not appear to be from attitudes to outcomes.

Does the review evidence suggest interventions should do something else?

It may be more effective to focus on changing actions and behaviours rather than attitudes. A number of considerations have led to this possible conclusion.

- There was some evidence from evaluations that changing behaviour had an impact on educational attainment. Parent interventions had the largest (statistically significant) effect sizes for educational attainment in this review, at 0.17–0.45. The parental behaviours that showed evidence of change were those that were about being involved in and encouraging their child's learning, development and education either at home or school.
- It is perhaps not surprising that it may be better to focus on behaviour, as changes in attitudes are only likely to bring about changes in attainment via changes in behaviour of some kind. There is little point in changing any of this set of three attitudes if behaviour does not change as a result.
- There were other evaluations in the review that showed impacts (albeit with small effect sizes) on educational attainment that also recorded impacts on behaviour, such as the quality of school work or the rate of completed work in mentoring, or university applications in extra-curricular activities.
- Where promising interventions were found – that is, with evidence of impact both on attitudes and on educational attainment, but without clear evidence of the direction of influence – they appear to involve the provision of information (about effective home learning techniques for parents or about what higher education actually involves, or about one's own progress through better academic mentoring, for example) or improved opportunities for learning (in academically focused clubs, or in skills developed within peer education or non-academic extra-curricular activities, for example). These interventions may improve attainment directly by changing behaviours or they may work indirectly by affecting attitudes.

However, there is a need not to overstate a conclusion that interventions should focus on behaviours. The quality of research in which we found changes in behaviour was variable and the effects on attainment were not large. In addition, we did not systematically set out to select interventions on the basis of bringing about changes in behaviour.

It is at least possible that had this review focused on other attitudes such as self-esteem and other behaviours (such as at-home good parenting) we might have found a chain of evidence from attitudes/behaviours to attainment. Attitudes other than our set of three and behaviours were seen as promising (by Goodman and Gregg, 2010) in their association with attainment, but were beyond the scope of this review. We suggest, however, that finding a chain of evidence from other attitudes to attainment may be unlikely in the case of attitudes other than our three. The relative lack of interventions that met the review criteria meant that we trawled far wider than our set of three attitudes. We found no evidence that there was a large body of interventions that we had excluded from the review that had a convincing impact on both other attitudes and educational attainment.

Research summarising the vast research literature on parent involvement and support throws some light on a discussion of the relative importance of focusing interventions on behaviours or attitudes. It is not the remit of this review to attempt to summarise this literature but a number of relevant points emerge. We consulted many reviews, particularly of programmes that aimed to improve parenting, in the search for interventions that fulfilled our criteria, and found a number of suggestions.

- Attitudes do not seem unimportant in the literature, and attitude change, particularly self-efficacy, is referred to in reviews and evaluations of parent programmes (Evangelou, *et al.*, 2008; Lindsay, *et al.*, 2008).
- However, where there has been a clear call in parent literature to raise parental aspirations (e.g. Desforges and Abouchar, 2003) this has been based on studies of associations between child attainment and parent aspirations rather than intervention evaluations. Such associational research is often referred to in literature emphasising the need to intervene with aspirations, suggesting that association may have been wrongly equated with causation.
- Although parenting programmes can change attitudes, there is some suggestion that a focus on attitudes may be less effective in changing child outcomes than a focus on parent skills, behaviours and actions (Moran, *et al.*, 2004; Fukkink, 2008).
- Furthermore 'parent involvement' takes many different forms, based on diverse theoretical rationales, and many programmes aim for changes in attitudes, actions, behaviours or skills. Effects on parents are complex to unravel. Perhaps a focus on attitudes alone fails to reflect this complexity.

Although parenting programmes can change attitudes, there is some suggestion that a focus on attitudes may be less effective in changing child outcomes than a focus on parent skills, behaviours and actions.

Moran, *et al.*, 2004; Fukkink, 2008

A very tentative case could be made from this review for other possible foci for interventions.

- An academic focus for the intervention: interventions that were more related to school attainment showed higher effect sizes in academic attainment. This includes parent involvement in children's learning, academically focused extra-curricular activities and mentoring. A case can be made – tentatively, due to the limited quantity and quality of research – that interventions that are likely to impact more directly on classroom learning might be more promising. These were also interventions (academically focused extra-curricular activities, mentoring and parent encouragement of child learning) that had a more convincing case in terms of economic costs and benefits. However, there are other reasons to carry out activities that are less academically focused, such as those developing skills and relationships.
- A focus on the development of relationships: some of the most promising interventions seemed to be about the development of particular kinds of relationships. In the mentoring interventions reviewed, a range of different relationships was developed deliberately for the purpose of improving attainment. In the qualitative data from the parenting interventions reviewed, there were comments from parents on the importance of the relationship with the intervention staff for bringing about change. In the extra-curricular activities reviewed the work was based on the fostering of certain relationships for working together. It is also consistent with what we were told by the young people we consulted on this review. There was no quantitative evidence for this conclusion but it seems to offer some promise as a line of enquiry.

What is to be done about aspirations, locus of control and valuing school?

The question of what to make of the review findings can be approached by looking further at the set of three attitudes themselves. This may help to consider whether appropriate interventions are still to be developed to influence these attitudes, or whether changing attitudes is not indeed the best

Contrary to the assumptions of much past and current policy, there is evidence that young people from poorer backgrounds have high aspirations ...

course of action. This review looked at what can be learned from research into ways the three attitudes are experienced by children and parents.

In reviewing past research into how these attitudes are experienced/expressed by young people and parents we were largely limited to a consideration of aspirations. There were few studies that tried to quantify locus of control or valuing school as child and parent attitudes, but a number of studies looking at aspirations. This is perhaps related to the focus on aspirations in policy. The need to do something about aspirations – as key to raising educational attainment and bringing about improved social mobility – has been a central focus of education, youth and community policy over the last ten years or more (DCSF, 2007; HM Treasury and DCSF, 2007; Cabinet Office, 2008; CLG, 2011), continuing with the current coalition government (Cabinet Office, 2011). Aspirational change has been the focus of initiatives and reviews of research literature (Gutman and Akerman, 2008; Learning and Skills Council, 2009; Barwick and Anderson, 2010; Regional Intelligence Unit, 2010). The other two attitudes considered in this interventions review – locus of control and valuing school – have not been under the policy spotlight in the same manner.

It is worth noting that there is a large associational literature, mostly from the US, modelling attitudes in different communities; for example, calculating the extent to which different measured attitudes (aspirations, in particular) accounted statistically for the attainment differences between different groups (for example, children from different ethnic groups). As we were looking for research quantifying attitudes in groups of different levels of relative economic advantage/disadvantage, such literature was not relevant to this discussion.

In their detailed examination of four large data-sets, there was evidence from the authors of the research that led to this review (Goodman and Gregg, 2010) that the relationship of aspirations to income group is not straightforward. First, as they clearly highlighted, their findings of statistical associations are not the same as causality. In some cases, the poorest of the five income groups did appear to have lower aspirations. For example, they reported from one study that:

81% of the richest mothers reporting that they hope their 9-year-old will go to university, compared with only 37% of the poorest mothers. By contrast, mothers' hope that the child will get decent GCSEs and stop there is almost unheard of among affluent families, but not uncommon among the less affluent.

– Goodman and Gregg, 2010

However, Goodman and Gregg also emphasised that, with respect to parental aspirations for advanced education: 'It is worth noting, however, that expectations for [higher education] are high across the board' (2010). There were also exceptions to a linear association between income and aspirations. For example, it was only the richest of the five income groups that had a noticeably different proportion of parents wanting their child to stay on at school at 16, or thinking them likely to go on to higher education.

Contrary to the assumptions of much past and current policy, there is evidence that young people from poorer backgrounds have high aspirations (Raby and Walford, 1981; Calder and Cope, 2004; Kintrea, *et al.*, 2011) and value school (Croll, *et al.*, 2008). Parents living in socio-economically disadvantaged circumstances also have ambitious aims for their children, give importance to school and school results and do what they can to support them

(Raby and Walford, 1981; Gilby, *et al.*, 2008; Crozier, 2009; Siraj-Blatchford, 2010; Kintrea, *et al.*, 2011). Similar general conclusions were drawn from research by Lupton and Kintrea on communities, that they 'cannot conclude definitively from the available evidence ... that aspirations are lower in socio-economically disadvantaged neighbourhoods' (2011). St Clair and Benjamin's findings of high student aspirations across different income groups and cities challenged the 'conventional wisdom' that disadvantage is perpetuated 'by the relative isolation of poor neighbourhoods and the development of inward looking and unambitious norms, with education not highly valued' (2011).

... this does not mean that aspirations no longer matter.

The aspirations of young people seem to be complex and culturally located. For example, Ahmed (2001) explored the relationship between religious and ethnic identity for British South Asian Muslim young women and their approach and aims for higher education. She proposed that their aspiration for higher education was not a symptom of a move away from traditional gendered religious norms in their community; instead, they were seeking a form of cultural capital recognised within their community and therefore a resource in their wish for a 'good marriage'. This kind of work is important because it can provide alternative narratives about the lives of those deemed the most socio-economically disadvantaged, marginalised and at risk. In another example, Baker and Brown (2008) argued that rural, working class, Welsh respondents they interviewed had a strong expectation that they would go to university, arising out of their socio-cultural background. The assumptions that others might make of them, that they would think education was not for them, missed the particular historical emphasis given to intellectual and cultural endeavour within the materially marginalised rural communities of the Welsh valleys.

It seems that despite a widely held belief (supported by more than a decade of policy) that the aspirations of socio-economically disadvantaged young people and parents need to rise, this review suggests that this is not indeed what is required. The finding of high child and parent aspirations among those socio-economically disadvantaged may, indeed, help to explain the lack of interventions that demonstrated impact on attainment by raising aspirations. However, this does not mean that aspirations no longer matter. Research literature shows a more complex picture of high aspirations that become stalled, with student choices post-16 marked (at all income groups, including those socio-economically disadvantaged) by turning points, instability, false starts and interruptions, negotiation, serendipity and escape attempts (Ball, *et al.*'s three-year in-depth study with 59 students, 1999). There was evidence from Goodman and Gregg (2010) that higher proportions of parents at all income levels think their children will go on to advanced education than eventually go:

While at age 14 over half (53%) of parents from the poorest fifth of the LSYPE⁴ sample report that their child is likely to go to university, only one in eight (12.5%) of the poorest fifth of children among a slightly older cohort did actually go to university by age 19. Among the richest fifth of the LSYPE sample at age 14, four out of five (81%) of parents think that university is likely, whereas only just over half (52%) of the richest fifth actually go to university by age 19.

– Goodman and Gregg, 2010

Depending on the relationship between the expectations of parents and the aspirations of young people, Goodman and Gregg's findings suggested that there may be a higher rate of stalling of ambitions for the poorer group of young people. Kintrea, *et al.*'s (2011) detailed interviews with 490 young

people in London, Glasgow and Nottingham suggested that many of the young people's high aspirations are similarly likely not to be fulfilled. Archer and Yamashita's small-scale study in a deprived, multi-ethnic inner London borough found that young people had dreams of working in the music industry, films, the airline industry, childcare or dancing, sports, the electrical/engineering sector, computing and as a doctor/teacher, but none were taking academic courses post-16 and 'all had a sense of their own "limits" and they appeared to consciously opt for "safe" routes, sticking to doing what you're "good at", which was not school work' (2003).

A simple raising of 'global' aspirations does not seem to be what is needed. Post-16 decisions seem neither irrational nor completely rational, but situated in the context in which young people are living rather than determined by attitudes (Archer and Yamashita, 2003; Ball, *et al.*, 1999; Bloomer and Hodkinson, 2000). Young people's horizons seemed to be set in part by external opportunities and the availability of jobs, training and education. Perceptions of the future seem to be rooted in the identity of the young person and strongly influenced by their life histories, the interactions they have with significant others, their educational inheritance, their experiences and the social and cultural background that is part of their identity.

Learning trajectories reinstated and kept on track

The characterisation of aspirations as 'dynamic, changing over time, and responsive to feedback from peers, family and educators' (Kintrea, *et al.*, 2011) leads to very different policies and practice from assumptions that 'global' aspirations are low and need to be raised. Such a characterisation suggests that interventions might be needed at appropriate times to help reinstate aspirations and to keep them on track.

Kintrea, *et al.* called for the following kinds of support for young people's ambitions:

... young people need informed and detailed help to take the pathways that are likely to lead to fulfilment of the longer-term ambitions. This requires better career advice and more access to work experience. There is a need for continual support at every stage of young people's development, and there have to be mechanisms to ensure that young people who do not take advantage of opportunities at traditional school age are not marginalised for life.

– Kintrea, *et al.*, 2011

Older young people (Calder and Cope, 2004) from socio-economically disadvantaged backgrounds had very clear perceptions of the barriers, to do with qualifications and confidence, that held them back from their goals. Opportunity rather than attitudes of any kind was the key factor spoken about by young people discussing the effects of poverty on education in research on children's and young people's views about poverty (Martin and Hart, 2011). Opportunities referred to included being able to attend a good school, to take part in school trips, and to have the desired material trappings such as the correct bag, computer, etc. Martin and Hart (2011) consulted with 73 children and young people, girls and boys aged 10–20 years, using focus groups from four of the most deprived authorities in England, and compared views with a contrasting population. There is also evidence that there may be a group of children and young people who experience a 'degree of alienation from the high aspiration, professionally focused discourse of schools' (St Clair and Benjamin, 2011; see also Croll, *et al.*, 2008) and who may need a particular range of targeted supports.

Schools to play their part

There is evidence that schools need to revise upwards their views of the aspirations of socio-economically disadvantaged children and parents. While this review did not systematically search for ways in which schools give support or otherwise to student ambition, there is some evidence that the school context might do more in this respect. Martin and Hart (2011) reported the views of children living in socio-economically disadvantaged circumstances as to the unhelpful attitudes of teachers to poorer children in general. Other research suggested that an opportunity might be being missed to translate good GCSE results into an opportunity to encourage young people to look again at how to get on track for their preferred jobs (Kintrea, *et al.*, 2011; Younger and Warrington, 2009). Several small-scale studies identified a lack of understanding of the lives, values, networks and aspirations of children and their families (Gewirtz, *et al.*, 2005; Crozier, 2009; see also Goodley and Tregaskis, 2006; Crozier and Davies, 2007). Gewirtz, *et al.* (2005) found evidence in interventions set up as part of the Education Action Zone initiative in the late 1990s that practitioners and policy-makers acted on imagined rather than real understandings of the lives of students and parents. Similarly, extended schools tend to be based on professional rather than child, parent or community understandings of the form that such aims and provisions should take (Cummings, *et al.*, 2007b).

Kintrea, *et al.* (2011) emphasised the important role of parents in supporting aspirational trajectories. However, schools do not always seem to make this easy to do. Crozier (2009) found few examples of teachers trying to meet parents on their terms and in a way that the parents could comfortably relate to (see also Gewirtz, *et al.*, 2005). Schools may misinterpret parent reticence as a lack of interest in their child's education, but parents may not be comfortable in engaging with schools in the channels open to them. Instead of hard to reach parents, Crozier (2009) talked of hard to reach schools.

Research literature on the positive contribution teachers make to the aspirations of young people (Kintrea, *et al.*, 2011), and the controversial body of research on teacher expectations (Jussim and Harber, 2005) are both areas acknowledged as relevant to a detailed consideration of the role of teachers. However, it is beyond the scope of this review to summarise these areas. The purpose of this section is to suggest that there may be a need for teachers and schools to pay greater attention to the actual perspectives, attitudes, resources and lived experience of young people and their parents, and to an enhanced role in keeping high aspirations on track. Schools need to be places with which the identities and motivations of young people can connect; i.e. contexts also need to be worked on.

In summary

It does not seem that aspirations need to be raised, so much as that young people (and indeed their parents) need informed support in terms of a range of opportunities and information in order to fulfil ambitions, and that schools need to be places that can contribute to this support. However, what it takes to progress – and the role of aspirations, locus of control and valuing school in this – is not well understood. It may well be the case that changed attitudes play a role in this. There is a need for more carefully placed interventions that consider what is needed, for different young people and their parents, to help progress over time. If aspirations are influenced by multiple mutually reinforcing factors – such as place, family and school – where changes are needed, the complexity might require more large-scale policy changes over time than the kind of interventions we have reviewed that lead to easily observable impact. If this is indeed the case, then the linear causality assumed

in the review question might now be replaced by a more dynamic and less predictable model.

Promising interventions may be those that keep aspirations on track

Promising interventions were found in this review; that is, with evidence of impact both on attitudes and on educational attainment, but without clear evidence of the direction of influence. It may be possible to conceptualise these promising interventions as those that play a particular role in keeping aspirations on track. Interventions included in the review were those that involved, in effect, the provision of information (about effective parenting techniques or about what higher education actually involves, or about one's own progress through better academic mentoring, for example) and improved opportunities for learning (in academically related clubs, to experience oneself as knowledgeable and able to learn in peer learning or extra-curricular activities, for example). The qualitative findings of review interventions contain many references to the experience of parents and young people of the kinds of opportunities, information and support that research literature (Ball, *et al.*, 1999; Calder and Cope, 2004; Kintrea, *et al.*, 2011) seems to suggest is needed to keep aspirations on track. While it is possible that the mechanism of change of interventions reviewed can be understood in terms of keeping aspirations on track, further research would be needed to look at this in more detail.

Area-based multi-strand interventions

There are some obvious limitations in this research since the criteria for the inclusion of interventions in the review included clear evidence of change. As a result, the review focused attention on particular kinds of targeted interventions that were able to demonstrate the impact that was being looked for. In this case, as we were looking for measurable effects on attitudes and educational attainment, there was a large and diverse array of interventions and provisions that were not included. The requirement to demonstrate evidence of impact both on attitudes and attainment in effect meant setting the bar high. For example, parent programmes that aimed to improve 'at-home good parenting' were largely omitted. The growing area of child participation – involving children in decision-making in schools – may be considered likely to influence locus of control and indeed aspirations and valuing school, but was omitted due to lack of data. The whole area of schooling was also omitted. There were many aspects of schooling omitted from the review that might impact on attainment in a way that involved some aspect of attitude change, including methods of teacher-pupil discourse, enquiry teaching methods such as thinking skills, approaches to assessment and many aspects of the culture of the school.

For the purposes of this discussion, we are interested in highlighting one group of omitted interventions: area-based multi-strand initiatives. Evaluation reports of this group of interventions were also omitted from the review due to the lack of relevant impact measures. However, it is possible that such interventions may be promising in terms of supporting the learning and aspirational trajectories of children and young people.

Extended schools and Sure Start, to give two examples, are area-based multi-strand initiatives in England instigated in the late 1990s and mid 2000s respectively (DCSF, 2008; NESS Team, 2010; Cummings, *et al.*, 2011). Extended schools operate a range of services and provisions to do with

childcare, different kinds of child and family support, family learning, and extra-curricular activities, often from 8am to 6pm. Services may be offered from a group of schools rather than a single school. Sure Start children's centres were set up in England in 2006 in relatively socio-economically disadvantaged areas and offer early education, integrated with health and family support services, and childcare from 8am to 6pm (NESS Team, 2005).

Area-based multi-strand initiatives such as extended schools or Sure Start combine a number of different interventions. It is possible that this combination, and the accessibility of interventions, may offer an effective way to support the learning and attainment trajectories of young people, and the ambitions of parents for themselves and their children, at the times and to the extent that this support is needed.

By way of example, the extended schools evaluations had case study evidence that suggested a chain of impact from parents' involvement in learning to their children's engagement in learning (Cummings, *et al.*, 2005; Cummings, *et al.*, 2006; Cummings, *et al.*, 2007a; Cummings, *et al.*, 2011). One possible such chain, extracted in a composite way from data (parent and extended school co-ordinator interviews) from various reports from the national evaluation of full service extended schools, is as follows:

- a parent values school learning and expresses this through attending family literacy sessions;
- sessions are enjoyed and the parent takes up the offer to enrol on other courses;
- the parent's child enjoys seeing the parent in school;
- the child and parent find they have a common experience of the people and culture of the school to draw upon;
- school seems a less alien environment for the parent so questions can be asked and problems can be sorted out with staff in a more timely manner;
- the parent now has new qualifications and is successful in gaining a job in the school kitchen; and
- the child is supported in giving value to learning due to a reaffirmed value of educational qualifications for the parent and the parent's continued interest in the value of schooling for child.

This chain of impact is suggested from interview data and must be regarded tentatively. The chain is a composite from various self-reports and could not be linked to widespread increases in educational attainment. However, it does suggest a more complex possible route from interventions to address the attainment gap for poorer children. It also suggests that such chains might vary from person to person. It is likely that the relationship between attitudes and attainment in such situations is complex and not simply linear. Attitudes may be important, but behaviours seem even more so.

Statistical evidence of positive, sustained and widespread impacts on educational attainment of area-based initiatives have to date been fraught with methodological problems. Some interventions that were sub-strands of extended services initiatives were included in this review, such as parent involvement, mentoring, peer education and extra-curricular activities. However, we were not able to consider in any detail the possibility of putting together a number of different initiatives in a way that could offer the kinds of support for aspirations that have been recommended by Kintrea, *et al.* (2011). Such a task was beyond the remit of this review.

We offer these as examples. We suggest that a fruitful area of research would be the review of the combinations of interventions into area-based multi-strand approaches, or large-scale policy changes, that show promise in

Also of use would be research that addresses how initial high aspirations adapt to constrained opportunities in the dynamic between parents, pupils and teachers.

supporting the learning and aspirational trajectories of parents and children, and in encouraging the contribution of schools. There is also a different approach to this combination of separate interventions that would benefit from further exploration in the UK context, which is to embed supportive relationships in normal practice. This more ecological model is reminiscent of Scandinavian schools. These are not interventions, but embedded practices of this kind may be very important for generating attitudes and attainments.

What kind of research is needed?

It is possible that attitude change can indeed be an effective way to bring about change in attainment, but research to show this has not yet been carried out. The methodological quality of the evaluations that were included in the review was generally poor; therefore, we cannot completely rule out such a conclusion.

However, given the absence from the studies we analysed of any sizeable impact on attitudes or of a chain of impact in the direction in which we are interested (i.e. impact on attainment via impact on attitudes), it seems at least probable that research quality is not primarily responsible for our findings. Furthermore, we have found evidence, in the form of high aspirations of parents and young people, which questions the need for any more simplistic change in attitudes. This, therefore, leads to the conclusion that this research review does not provide a compelling rationale to advise more robust evaluations of interventions. There is a need to look in a different way at the original review question of whether attainment can be raised via the mechanism of impact on aspirations, locus of control or valuing school. Also of use would be research that addresses how initial high aspirations adapt to constrained opportunities in the dynamic between parents, pupils and teachers.

Substantial improvement is, however, needed in the quality of evaluation of interventions. A clear recommendation is the need to evaluate interventions by using current methodological best practice in whatever methodology is most appropriate – quantitative, qualitative or mixed methods. A detailed appraisal of the methodological shortcomings of the evaluations included in the review is beyond the scope of this discussion, but two aspects seemed particularly in need of attention: one is the lack of detail about the theory of change of interventions, and the other is the way attitudes are measured.

There was little evidence of clear theories of change, or logic models, for how the impact of an intervention was to occur. The articulation of such a theory would help to identify interim and final outcomes of an intervention that could then be measured in some way. Without these theories or models, interventions seem to come across as some kind of 'black box' in which change occurs. Without a theory of change, as well as evidence that change happens in the way theorised, it is not easy to see how the mechanisms by which interventions bring about impact can be identified. In the case of this review, there was no detailed explanation within the interventions of the place of attitudes as mechanisms of impact on attainment. Such theories of change were most visible in the larger-scale interventions such as PAT (Parents as Teachers; Pfannenstiel and Zigler, 2007) or extended schools (for example, Dyson and Todd, 2010). If future research is to explore the mechanism of impact, it will need to have both robust qualitative research to investigate the process and to have articulated robust theories of change or logic models of the interventions (Connell and Kubisch, 1998).

Measures of aspirations, locus of control and valuing school most often equate the possession of an attitude to responses to a small number –

sometimes just one or two – of closed questions. While such approaches enable the use of statistical calculations and facilitate the testing of large numbers of people, there is a danger that the questions asked fail to resemble the attitudes as experienced by young people and parents. Too often research using these measures fails to justify the relationship between a measure and an appropriate conceptualisation of the attitude in question. Quantification may not reflect the diversity with which attitudes are personally constructed. Indeed, at the moment there is either no measure (valuing school) or only measures that vary widely in quality (aspirations and locus of control) or in how they define attitudes. We may not yet know enough to measure and use quantitatively the varied experience of the set of three attitudes. For example, the more nuanced understanding of aspirations, and the distinction between raising them and keeping them on track, has only emerged from this research through the detailed qualitative consideration of the different expressions of aspirations of young people and parents (Ball, *et al.*, 1999; Kintrea, *et al.*, 2011). Where methods are used in research that record attitudes, they should record the ways attitudes are experienced and articulated by children and parents, using detailed approaches over time, rather than relying on questionnaire responses to pre-prepared questions. More appropriate detailed research tools need to be developed in this area, as well as means for exploring attitudes other than by simplistic measures.

Although all interventions reviewed were judged appropriate for socio-economically disadvantaged children and families, where some described evaluation subjects in terms of a kind of disadvantage, this was rarely clearly defined. As a result, if there had been effective interventions on attainment via attitudes, we would not have found it easy to assess the evaluation in terms of the appropriateness of the sample. Details of definitions are needed if research is to make a difference to socio-economically disadvantaged populations.

Future evaluation of interventions should include more detail on the interventions to assist the calculation of cost–benefit analyses. It was not easy in this review to generate cost–benefit analyses of interventions, and what made this even more difficult was the lack of detail in the reports about the interventions. The inclusion of better data on the inputs and/or associated costs, both direct and indirect, is recommended. More rigorous quantification of impact is also needed in order to give a value to benefits. Where benefits and impacts are reported, attention should be directed as well to the level of detail given to be relevant to cost–benefit calculation.

Concluding comments

Finally, although this review has not found evidence that interventions are likely to close the attainment gap through a focus on some specific attitudes – aspirations, locus of control and valuing school – these attitudes still have a place in work with children and young people. There is body of research that suggests that most parents and children have high aspirations and give value to school regardless of their socio-economic status. What therefore appears to be needed is the carrying out of a review of research in order to look at what kind of interventions, and what combination of interventions, might help to keep the learning and aspirational trajectories of children on track, and to give parents and schools a clear supporting role. The large number of interventions and practices, including schooling, omitted from this review could be included in such an investigation. It is possible – indeed likely – that the interventions reviewed in this report would have a place in such a task. Such a review could look at the role of child and parent participation in schools

and services (thereby drawing on their knowledge and resources). A review could also explore a variety of delivery models including area-based multi-strand initiatives and ecological approaches. Any approaches that focus on the individual should be considered as part of wider structural changes needed to address poverty and other measures to tackle the effects of poverty. There is an even broader philosophical question as to what sorts of ambitions and aspirations schools should seek to encourage, and how this relates to the kind of education and schools we seek to develop, and indeed what type of society we want.

NOTES

- 1 <http://www.familiesandschools.org/international.php>
- 2 See the Technical Report on cost–benefit analysis for further details of this estimate:
<http://www.ncl.ac.uk/cflat/JRFInterventionsReviewTechnical>
- 3 See, for example, the England Volunteer Council: <http://www.volunteering.org.uk>
- 4 LSYPE: Longitudinal Study of Young People in England (see <https://www.education.gov.uk/ilsype>).

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Colleen Cummings worked in the area of researching extended schools for many years. She is now following an ambition to have more direct positive influence on young people as she trains to become a primary school teacher.

Karen Laing has been conducting research around interventions that support vulnerable and disadvantaged children, young people and families for over a decade. Much of her work is from a social policy perspective, but crossing disciplinary boundaries in family law, criminology, social work, and education.

Professor James Law has published extensively in the field of child language and language learning difficulties. Specifically he is interested in how language changes throughout childhood, the costs of language learning difficulties to the individual and to society, and interventions which have the potential to improve circumstances for the children concerned.

Dr Janice McLaughlin is Executive Director of the Policy, Ethics and Life Sciences Research Centre at Newcastle University. Her own research examines disability in childhood, its influence on family life and ways in which such children are cared for by social and medical institutions.

Ivy Papps is the Director of Tecis Ltd and an economist specialising in the economic analysis of social policy. Much of her recent work has focused on the value for money generated by policy initiatives both in the UK and in the developing world.

Professor Liz Todd has been contributing through challenge, research, teaching and action to addressing educational inequalities and issues of diversity and inclusion for the last twenty years. Previously a maths teacher and an educational psychologist, some of her interests include the relationships between parents and schools/services, child participation in decision-making in schools and services, extended schools as a way to address disadvantage, and collaborative approaches to change (narrative therapy and video interaction guidance).

Pam Woolner, previously a secondary school teacher, has over a decade of varied, direct experience in educational research spanning a range of designs and methods. Her main research interest is in understanding the learning environment provided by schools and investigating the participation of the whole school community in this understanding.

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