Research Report DFE-RR116

Key Stage 2 career-related learning pathfinder evaluation

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Contents

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Executive summary

Introduction

This executive summary presents the aims, methodology, key findings and implications from an evaluation of the Key Stage 2 Career-Related Learning Pathfinder pilot programme (referred to as the Pathfinder or Pathfinder programme). The study was undertaken between July 2009 and October 2010, in the seven local authorities (LAs) that were successful in bidding to deliver the Pathfinder pilot.

Aims and objectives

Objectives of the Pathfinder pilot

The specific objectives of the Pathfinder pilot itself were to:

- Increase pupils' awareness of career/work opportunities;
- Increase their understanding of the link between education, qualifications and work opportunities;
- Reduce gender-specific career/role stereotypes; and,
- Engage parents/carers in the process and so change their attitudes, perceptions and aspirations relating to their children's education and career choices.

Aims of the evaluation

The overarching aim of the evaluation study was to test the hypothesis that: **'introducing career-related learning at Key Stage 2 (in disadvantaged areas) increases and widens pupils' education and career aspirations'**, and in so doing, to investigate the extent to which the Pathfinder pilot had achieved the four objectives listed above.

Background

Ensuring that children and young people have access to good quality information, advice and guidance (IAG) has been a concern of successive administrations and in 2007, The Children's Plan 14-19 Expert Group recommended that IAG should be embedded at a younger age, as the natural focus for this has tended to be in secondary schools. The Children's Plan: Building Brighter Futures (Department for Children, Schools and Families, DCSF, 2007) committed the then DCSF to funding a project which would explore the impact of early career-related learning at Key Stage 2 (focused mainly on Year 6, when pupils would be 10 or 11 years old). The resulting

Pathfinder pilot therefore focused on developing pupils' growing perception of their own place in the world of work. By enabling pupils to learn about themselves and the occupational choices they could have, through a programme of career-related learning, the intention was to help them develop a better view of their self-efficacy. This, according to Bandura *et al*., (2001)[1] and reflected in Blenkinsop *et al*. (2006),[2] is a key factor in raising young people's aspirations. In addition, the Pathfinders aimed to help pupils learn about the ways in which they could bring about their preferred occupational outcomes, even though they may live in disadvantaged areas. Such career-related learning may have the potential to ameliorate the likely restrictions arising out of limited cultural capital, thus widening horizons and encouraging pupils to think beyond 'known' familial or experienced occupations.

The seven LAs in which the Pathfinder programme was undertaken were geographically spread across England, but were similar in having densely-populated urban areas with high levels of social and economic deprivation. The primary schools which were involved in the Pathfinder were invited to do so by their LAs because the challenges of their social environment were considered particularly relevant to the aims of the programme.

Methodology

A multi-method approach was employed and based around three strands:

- **A scoping study.** Document reviews and telephone interviews with key personnel from seven LAs running the Pathfinder programme were employed to examine implementation plans and activities.
- **Quantitative data collection and analysis**. A quasi-experimental design was used, involving 120 comparison schools matched to 38 Pathfinder (treatment) schools. Three surveys of the same pupils were conducted: one at pre-Pathfinder stage, in autumn 2009 (n=5,545); a second in spring 2010 (n=5,403) and a final Sweep in July 2010 (n=5,284). In addition, a school questionnaire was completed by headteachers at the time of the first (n=127) and third pupil survey Sweeps (n=108), to find out which career-related learning activities each school was engaged in.
- **Case studies**. Seven case study schools were selected, one in each participating LA, and they were visited in two stages: the first in late autumn 2009, at the beginning of the Pathfinder, and a follow-up visit in the summer term 2010, towards the end of the activities. In total, during the first round of visits, 60 face-to-face interviews were conducted with staff and pupils. The same interviewees (where possible) took part in the second visit; during the second round 63 interviews were conducted involving school staff, pupils, parents/carers and community Pathfinder partners.

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1 Bandura, A., Barbaranelli, C., Caprara, G.V., and Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories, *Child Development, 72*, 187-206.

2 Blenkinsop, S., McCrone, T., Wade, P. and Morris, M. (2006). How do Young People Make Choices at Age 14 and Age 16? (DfES Research Report 773). London: DfES.

Key findings

The principal findings are summarised here, under sub-headings of the four original aims of the pathfinder.

Aim 1: Increasing pupils' awareness of career/work opportunities

- Pupils involved in the Pathfinder pilot showed increased awareness, knowledge and understanding of types of employment and pathways to get there;
- The Pathfinder intervention was associated with an increase in career-related learning activity in these schools in comparison to what other similar schools were doing;
- School staff considered that the Pathfinder had suited their school ethos and assisted in broadening the horizons of pupils, increasing their confidence and resilience and encouraging greater realism in their future expectations; and,
- There was some evidence that the Pathfinder had helped to raise pupils' aspirations for the future and extend their horizons about what they could do in the future, for instance:
  - Between the baseline period and Sweep 2, pupils eligible for Free School Meals (FSM) and pupils in Year 5 in Pathfinder schools showed a significant increase in confidence in their ability to do a professional level job in the future (although this difference was not sustained at Sweep 3);
  - Between baseline and Sweep 2, boys in Pathfinder schools showed a greater increase in confidence than girls in those schools that they could do a skilled job in the future (this difference was not sustained at Sweep 3);
  - Between baseline and Sweep 3, Pathfinder Year 5 pupils showed a greater increase in confidence in their ability to do a professional or a skilled job; and,
  - Case study findings suggested that the programme had helped some pupils to develop a deeper understanding of what they needed to do to achieve their future aspirations.

Aim 2: Increasing pupils' understanding of the link between education, qualifications and work opportunities

- Pupils involved in the Pathfinder pilot showed increased understanding of the link between education, qualifications and careers and a more positive attitude towards school and education; and,
- Elements of the Pathfinder had been built into the curriculum and underpinned delivery; events, such as a university visit, or drama presentation, provided highlights and focused learning, and were reported as particularly successful.

Aim 3: Reducing gender specific career/role stereotypes

- Pupil survey results showed that over the course of the evaluation, Pathfinder pupils showed a greater decrease in stereotypical thinking and greater improvements in their perceptions of the effectiveness of career-related learning in their school than comparison pupils;
- The findings indicate that involvement in the Pathfinder pilot could be associated with greater decreases in pupils' stereotypical perceptions beyond that seen with usual career-related learning delivery in schools at Key Stage 2; and,
- The Pathfinder may especially have been successful in decreasing stereotypical thinking among pupils about the jobs that they could do in the future, and closing the gap between disadvantaged pupils and their peers in terms of their confidence in their ability to work effectively and their choices for the future.

Aim 4: Engaging parents/carers in this process

- As had been anticipated at the start of the pilot, engaging parents/carers was viewed by schools and LA interviewees as the weakest element of the Pathfinder. This was also reflected in the survey findings, as although Pathfinder schools reported involving parents/carers in career-related learning to a greater extent than comparison schools, the difference was small and not every Pathfinder school was doing this; and,
- All case study schools had attempted to engage parents/carers, some more successfully than others. Overall, few schools had successfully engaged parents/carers in the Pathfinder pilot and this is a challenge that could be addressed if the programme continues. Some positive exemplars of good practice arose from the case studies which could be built on by other schools.

Other key findings include:

Other benefits to pupils involved in the Pathfinder

Pupils involved in the Pathfinder pilot also showed evidence of:

- Improved skills, including team-work and independence;
- Increased understanding of different sources of help/advice about making choices;
- Increased self-confidence, especially around transition to secondary school. For example, at baseline, pupils eligible for FSM in Pathfinder schools had lower confidence than all otherwise similar pupils. By Sweeps 2 and 3, Pathfinder FSM eligible pupils showed a greater improvement in confidence than all otherwise similar pupils;
- Improved attendance and attainment, with a perception in some schools that this had helped to improve SATs results; and,

- The Pathfinder had been successfully linked in with preparation for transition to secondary school and was reported to have reduced pupils' concerns about transition.

Closing the gap

There was evidence from the survey that involvement in the Pathfinder helped to close the gap between pupils eligible for FSM and their peers, especially in terms of confidence in their ability to work effectively, and the types of jobs they perceived they could do in the future. The Pathfinder also appears to be particularly effective at meeting the career-related learning needs of more vulnerable pupils (such as those with Special Educational Needs [SEN]). By the end of the Pathfinder, more disadvantaged pupils felt that skilled and professional jobs were an option for them. In these ways, elements of the Pathfinder helped to provide pupils from perhaps the poorest and most vulnerable backgrounds with the opportunity to fulfil their potential.

Increasing confidence and self-esteem

Case study evidence showed that despite the pilot's official title, the Pathfinder was considered to be about more than raising aspirations, which was a term considered by some interviewees to carry a value-judgement. It was about extending pupils' horizons by increasing their awareness of the different choices and pathways open to them in the future, and building their confidence and self-esteem. In particular, school staff had used the Pathfinder pilot to encourage realistic aspirations and to show pupils the routes towards achieving these. Interviewees in all the case study schools considered that the programme had achieved these aims, and in particular had extended the horizons and increased the confidence and self-reliance of the pupils involved.

Curriculum integration

According to school staff, the main elements of the Pathfinder provided a useful structure to schools, which they could supplement with their own chosen career-related learning activities. School staff welcomed the opportunity to have the flexibility to develop innovative and diverse provision of career-related learning, tailored to meet the specific requirements of their pupils. Schools had seized the opportunity to develop a curriculum that best suited the pupils, and linked into existing priorities, such as healthy eating, raising attainment in literacy, or developing personal financial skills. School staff also reported positively on the value of the links between the Pathfinder and work on transition from primary to secondary school, and the greater confidence with which pupils now approached transition.

Partnerships

The Pathfinder pilot had helped to bring together schools, parents/carers, the local community and local businesses and so tapped into the social capital of local communities. Contact with local places of work and further and higher education had not only increased pupils' awareness of different career options and pathways, but also provided them with positive role models, some of which were particularly useful in challenging gender-based stereotypes. Additionally, through these contacts, school staff reported that pupils gained greater confidence and maturity, and were more willing to take on responsibilities such as peer mentoring and initiating fund-raising opportunities.

Conclusion

Set against the developing priorities for education in England, the weight and constancy of the evidence collected is very encouraging. The fact that all case study schools were intending to continue the Pathfinder despite the end of additional funding, and that some schools intended to extend it lower down in Key Stage 2, is testament to the perceived benefits of the Pathfinder.

Although it was introduced before the change in government, the evidence suggests that the programme has the potential to fit well with the developing priorities for education in England, in particular in its potential to help 'close the gap' for disadvantaged pupils, to encourage schools to develop a curriculum and practices that best suit their circumstances, and to give impetus to building strong local partnerships.

Implications

Wider use of the Pathfinder

Based on these initial findings, it is suggested that the Department for Education (DfE) could provide information on the Pathfinder and its possible value as a programme of work that schools can adapt and implement to meet their individual context and need, and that could be effectively replicated in a wide range of school settings.

The apparent positive outcomes of the pilot for pupils support the idea that providing career-related learning at Key Stage 2 is an optimum time, as it is when pupils are still open and responsive to new ideas, and before they begin to narrow down their options. However, since the evidence indicates the Pathfinder's particular potential contribution towards 'closing the gap', it is suggested that the DfE stress the potential value of such career-related learning activities for schools where these may be most effective; namely, on schools situated within areas of economic and social disadvantage.

Value for money and sustainability

Overall, for comparatively low costs, the case study school interviewees considered that the Pathfinder had successfully delivered on its stated aims and objectives, and all the case study schools intended to sustain at least some elements of the programme and extend them to other year groups. The DfE could support making information available on the approaches used in the pilot and their advantages for schools.

Parental engagement and community partnership

For schools situated within areas of deprivation, involving and engaging parents/carers were particular challenges and while the study confirms this, the Pathfinder had provided some schools with an opportunity to address this issue, through providing a vehicle for greater parental engagement. In addition, as integral elements of Pathfinder activity, schools develop wider links within their community. This fits well with encouraging and facilitating schools' efforts to build useful local partnerships.

Building on the Pathfinder pilot and sharing good practice

The evaluation has provided a range of exemplars of good practice developed and implemented by Pathfinder schools. The DfE could help support the dissemination of good practice to enable schools to build on the 'what works' knowledge and practice already tried and tested during the Pathfinder pilot.

1. Introduction

This report presents the findings from the evaluation study of the Key Stage 2 Career-Related Learning Pathfinder (referred to as the Pathfinder pilot). The National Foundation for Educational Research (NFER) was commissioned by the then Department for Children, Schools and Families (DCSF), now the Department for Education (DfE), to undertake this study from July 2009 to October 2010.

1.1 Background to the study

According to Gottfredson's theory of circumscription and compromise (2002),[3] children begin to eliminate their least-favoured career options between the ages of nine and 13. By those ages, it is argued, they will have abandoned the 'fantasy' careers associated with the very young, and have started to become more aware of potential constraints on their occupational choice. Some of these possible barriers relate to perceptions arising out of poor socio-economic circumstances,[4] reflect factors allied to low resilience (such as low self-esteem and an unwillingness to take risks), or emerge out of (often untested) perceptions about a lack of ability in either academic or practical fields. As a result, children may limit their educational and other experiences and occupational choices at a time when their views are too constrained to make a sound judgement. These observations suggest that timely interventions can have a positive impact on inhibiting stereotyped and self-limiting thinking about opportunities long before major decisions have to be made. Although the frequent career decision-making that characterises choice and planning in the secondary school is still some way off, even primary school children are involved in decisions about developing their skills and participating in the decision about choosing a secondary school.

Some of the research evidence about the positive benefit of well-chosen, early career interventions comes from international studies, such as Andrew Helwig's longitudinal study of children's career development.[5] They have tended to concentrate on the potential impact on the child's own career development; but in this country there has also been interest at the policy level on the possible extrinsic benefits of planned career-related learning activities on children's attendance, attainment and engagement in their own schooling, particularly for children living in socially-disadvantaged areas.

Ensuring that children and young people have access to good quality information, advice and guidance (IAG) has been a concern of successive administrations and in

[3] Gottfredson, L. S. (2002). 'Gottfredson's theory of circumscription, compromise, and self creation'. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 85-148). San Francisco: Jossey-Bass. Cited in Gutman and Akerman (2008), *Determinants of aspirations*, Centre for Research on the Wider Benefits of Learning, Research Report 17. IoE.

[4] Gutman and Akerman describe the 'floor and ceiling effects' for young people from families in different socio-economic circumstances.

[5] Helwig, A. (2008). 'From childhood to adulthood: A 15 year longitudinal career development study', Career Development Quarterly 57 (1): 38-50

2007, The Children's Plan 14-19 Expert Group recommended that IAG should be embedded at a younger age, as the natural focus for this has tended to be in secondary schools, particularly leading up to the point at which pupils begin considering their Key Stage 4 option choices. The Children's Plan: Building Brighter Futures (DCSF, 2007) committed the then DCSF to funding a project which would explore the impact of early career-related learning at Key Stage 2 (focused mainly on Year 6, when pupils would be 10 or 11 years old). The resulting Pathfinder pilot, therefore, focused on developing pupils' growing perception of their own place in the world of work. By enabling pupils to learn about themselves and the occupational choices they could have, through a programme of career-related learning, the intention was to help pupils develop a better view of their self-efficacy (an individual's belief in his/her own ability to succeed in a particular situation, or deal with the challenges of life). This, according to Bandura *et al*., (2001)[6] and reflected in Blenkinsop *et al*. (2006),[7] is a key factor in raising young people's aspirations. In addition, the Pathfinders aimed to help pupils learn about the ways in which they could bring about their preferred occupational outcomes, even though they may live in disadvantaged areas. Such career-related learning may have the potential to ameliorate the likely restrictions arising out of limited cultural capital, thus widening horizons and encouraging pupils to think beyond 'known' familial or experienced occupations.

In March 2009, the then DCSF invited Local Authorities (LAs) to submit proposals to deliver the Pathfinder pilots across a number of primary schools within their local area. Seven LAs were successful in bidding to deliver the pilots. They were geographically spread across England and all included urban areas with high levels of disadvantage.

A key feature of the pilots was that LAs and individual schools were given the opportunity and flexibility to develop innovative and diverse approaches to career-related learning, tailored to meet the specific requirements of their pupils. The main obligation placed on the Pathfinder pilot schools was, therefore, that they would follow a common methodology:

- Identify their pupils' specific need for career-related learning;
- Audit the existing curriculum to see where this learning was already supported; and,
- Design, plan and deliver a programme of career-related learning based on the learner needs analysis and curriculum audit.

The LAs agreed with their schools the menu of 'high-profile' activities that pupils would undertake. Individual schools were then able to supplement this programme with their own chosen classroom activities. A grant of up to £60,000 was made

[6] Bandura, A., Barbaranelli, C., Caprara, G.V., and Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories, *Child Development, 72*, 187-206.

[7] Blenkinsop, S., McCrone, T., Wade, P. and Morris, M. (2006). How do Young People Make Choices at Age 14 and Age 16? (DfES Research Report 773). London: DfES.

available to each successful LA. The funding provided to LAs was expected to cover the costs of:

- The management of the project;
- Support for relevant staff training and curriculum development;
- Provision / development of materials;
- Development and delivery of activities; and,
- Facilitation of networking.

1.2 Aims of the Pathfinder and of the evaluation

Objectives of the Pathfinder pilot

There was a recognition that the ultimate outcome of career-related learning – the pupils' actual choices of educational participation and careers – were a long way in the future, but the Pathfinder's specific objectives were stated as:

- To increase pupils' awareness of career/work opportunities;
- To increase their understanding of the link between education, qualifications and work opportunities;
- To reduce gender-specific career/role stereotypes; and,
- To engage parents/carers in the process and so change their attitudes, perceptions and aspirations relating to their children's education and career choices.

Aims of the evaluation

The overarching aim of the evaluation study was to test the hypothesis that:
'introducing career-related learning at Key Stage 2 (in disadvantaged areas) increases and widens pupils' education and career aspirations', and in so doing, to investigate the extent to which the Pathfinder pilot had achieved the four objectives listed above.

This hypothesis has a root in Gottfredson's theory and reflects particular concerns about the educational and economic outcomes of pupils living in the most disadvantaged areas. National Indicator data, for example, shows that variations in attainment and progression outcomes, in relation to deprivation, are apparent across all age groups, from early years through to age 19 and beyond. By age 19, for instance, young people from areas of high deprivation, on average, have lower levels of qualification (though the gap has narrowed in recent years) and a higher proportion will be not in education, employment or training (NEET).

In addressing the overarching aim (exploring whether introducing career-related learning at Key Stage 2 in disadvantaged areas increases and/or widens pupils' education and career aspirations), the research team proposed an evaluation design that would take account of both context and intervention.

In their planning, LAs and schools were also asked to address issues of curriculum integration, parental engagement, sustainability and staff development, and the research study therefore, also investigated these particular aspects of the Pathfinder pilot.

It should be noted that this evaluation study was commissioned under the previous government. However, the current government is embarking on an active reform programme, which includes a commitment to addressing the disparity in outcomes between those from less and more economically advantaged backgrounds, and the announcement of a 'pupil premium' is designed to help schools in less advantaged areas to provide additional support for the pupils they serve. Additionally, there is a focus in current policy on providing schools with the flexibility to decide on the best approaches for their circumstances and pupils, and a 'light touch' approach by LAs, as well as encouraging the development of partnerships within local communities. As all these areas relate specifically to the outcomes from the Pathfinder pilot, reference is therefore made to new policy priorities in the concluding chapter, and where relevant in other chapters.

1.3 Methodology

The evaluation employed a multi-method approach, based around three strands:

- **A scoping study** – using existing documentation to examine implementation plans and activities, and telephone interviews with key personnel from the seven LAs selected to undertake the Pathfinder pilot.
- **Quantitative data collection and analysis** – based around surveys sent out to 38 participating (treatment) schools and a sample of comparison schools. These took place in three Sweeps: the first pre-Pathfinder, in autumn 2009; a second in spring 2010 and a final Sweep (post-Pathfinder) in July 2010.
- **Case studies** – visits to seven schools (one in each participating LA) in two stages: the first in late autumn 2009 at the beginning of the Pathfinder pilot, and a follow-up visit in the summer term 2010 towards the end of the activities.

1.3.1 Scoping study

This was undertaken between August and October 2009, to gain insight into the proposed implementation of the Pathfinder, and to inform the design of research instruments. It included telephone interviews with representatives of the seven participating LAs to obtain information about their approach to the Pathfinder and the expected benefits and challenges. Information was also obtained from the two

consultants, appointed by the then DCSF to support the implementation of the programme across all seven areas. Subsequently it was agreed with DfE that follow-up telephone interviews would be conducted and these took place in July and August 2010 in six areas (it was not possible to contact one area). The interviewees provided their perspective on the impact of the Pathfinder pilot and its sustainability.

1.3.2 Quantitative data collection

In the evaluation, two surveys were used to collect data from schools:

- A pupil survey to assess the impact of the Pathfinder on pupil outcomes; and,
- A school questionnaire, which was completed by headteachers, to examine which career-related learning activities each school was engaged in.

Pupil survey

In the survey strand of the research, a quasi-experimental approach was adopted, in which pupils' responses between Pathfinder schools and other similar non-Pathfinder schools ('comparison' schools) in the same LAs were compared over time (see Appendix 1). By comparing responses for Pathfinder and comparison schools, it was possible to assess whether involvement in the Pathfinder pilot was associated with different outcomes for pupils than usual career-related learning practice in schools at Key Stage 2.

Year 5 and Year 6 pupils in Pathfinder and comparison schools completed the survey at three points during the evaluation:

- At baseline, in November and December 2009, before the Pathfinder pilot activities were due to start in schools (Sweep 1);
- In March and April 2010, while the Pathfinder pilot was being delivered in schools (Sweep 2); and,
- In late June and early July 2010, after the Pathfinder pilot activities had been delivered (Sweep 3).

It should be noted, however, that (as the case study findings indicated) some Pathfinder schools had already started some career-related learning activities before Sweep 1 and that at Sweep 3, while the main parts of the Pathfinder pilot had been delivered, there was still some ongoing career-related learning activity in schools.

The survey was piloted with primary school pupils early on in the research design process to check that they understood the five-point response scale used for answers and to check whether there might be any other potential problems with completing the survey. Further, this was used to trial a set of notes that were written to give teachers guidance on administering the survey to their classes and the guidance was altered as a result of the feedback received.

After piloting, identical surveys were sent to the Pathfinder and comparison schools and exactly the same questions were used at each Sweep. The questionnaire completed by the pupils is shown in Appendix 1. Pupils completed a paper copy of the survey in class and were given guidance and supported by their teacher in completing it. Further information about the surveys and all the findings, in terms of descriptive statistics, from each Sweep can be found in the three basic frequencies appendices accompanying this report.

School questionnaire

The school questionnaire, which was completed by headteachers, contained questions about (see Appendix 2):

- Whether the school had conducted a formal analysis of pupils' personal development needs in relation to a number of career-related learning elements, for example, pupils' self-esteem and their aspirations for the future; and,
- The career-related learning activities in which the school was engaged.

The data made it possible to find out and compare what both Pathfinder and comparison schools were doing in terms of career-related learning. This information then helped to set the context to the findings about pupil outcomes over time.

Headteachers completed the questionnaire at baseline (Sweep 1) and then again at Sweep 3 (they did not complete it at Sweep 2). The survey was identical at each of these time points. A copy of the school questionnaire can be found in Appendix 2. For more information about the school questionnaire, along with all the findings, in terms of descriptive statistics, from each Sweeps 1 and 3, please see the basic frequencies appendices accompanying this report.

1.3.3 Case studies

The Pathfinder case study schools shared a very similar background in terms of their social context. All were in areas of deprivation, blighted by a culture of benefit dependency and low aspirations, where pupils were considered to be at risk from poor attendance and limited parental support. School staff commented on the limited horizons of the majority of their pupils, who rarely travelled outside their home areas and whose attitudes were consequently perceived to be insular. It should however, be emphasised that this was the general picture, and that there were pupils in all the schools, and parents/carers, who did not fit into this picture.

The schools had been given information about the Pathfinder by their LA as the challenges of their social environment were considered particularly relevant to the aims of the programme. The school contexts were also similar in that all had School Development Plans that were focused on the areas of raising pupils' aspirations and broadening horizons, and improving attendance and attainment. They shared a school ethos that was committed to giving individual pupils the skills and confidence necessary to think positively about their futures, regardless of home background. The

headteachers and the LAs also considered that the programme linked in with various existing approaches to improving outcomes for pupils and all had, to some extent, already developed curriculum approaches and activities that were connected to achieving economic well-being and gaining understanding of the world of work.

One case study school was selected in each of the seven Pathfinder areas, which were geographically spread across England. Based on recommendations from Pathfinder LAs, selection was focused on choosing schools which would be likely to provide interesting, in-depth case study examples. Each school was visited twice. The first visits took place between November 2009 and January 2010, and were baseline visits, to investigate what career-related learning approaches the schools already used; reasons for involvement in the Pathfinder; preparations for implementation; and expectations of the programme's challenges and outcomes. Interviews were conducted with headteachers and relevant teachers, and with groups of pupils who were chosen by their teachers to represent different ability levels and a gender balance. In two schools staff had decided to use the Pathfinder pilot with Year 5 classes, but most used it with Year 6.

The purpose of the pupil group interviews was to obtain a picture of the pupils' views at that time of their aspirations for the future, how realistic these appeared to be, and the sources from which they derived information about school progression and the workplace.

Follow-up visits were conducted in June and July 2010, at a time when Pathfinder activities were generally reaching their conclusion. Teachers, headteachers and pupils were able to reflect on how their schools had implemented the Pathfinder; its impact, challenges and sustainability. In most cases the same pupils were interviewed – there were only a few substitutions for absentees. During these second visits, it was possible to gain some idea of the extent to which pupils' attitudes towards their futures and understanding of the world of work had changed.

Telephone interviews were conducted with a total of three parents (from three different areas) in late 2009, in order to find out what parents/carers knew about the Pathfinder, as well as their views on their children's attitudes to their future. During the second phase of follow-up visits, there were small group interviews with parents in two schools, and two parents (from other areas) were interviewed by telephone. These parents gave their views on the level of their involvement with career-related learning and the impact of the Pathfinder on their children, and where relevant, on them.

Telephone interviews also took place with representatives of partner organisations that had been closely involved in the Pathfinder in four of the case study schools, in July and August 2010, to gain an external perspective on support for the Pathfinder.

Table 1.1 shows the number of interviews conducted over both visits.

Table 1.1 Number of case study-related interviews

Interviews conducted	First visit	Second visit
Headteachers	7	4
Teachers	9	7
Pupils	41	41
Parents	3	7
School partners	0	4
Interview totals	**60**	**63**

Local authorities

Prior to the case study visits, telephone interviews were conducted with representatives from all the participating LAs. These provided information on why the Pathfinder pilot was being implemented in particular schools, the support that would be available for schools and the expected outcomes. Follow-up interviews were achieved in six LAs at the end of the summer term to obtain an overview of the perceived success of the programme and its sustainability.

1.4 Structure of the report

The rest of the report follows this structure:

- **Chapter 2** explains the approach, aims and results of the survey analysis.
- **Chapter 3** considers the context of the case study schools; the ways in which they implemented the Pathfinder pilot, the nature of the support received; the perceived impact and successes of the Pathfinder; the challenges of implementation and views on the sustainability and future of the programme.
- **Chapter 4** draws together the key messages from the evaluation and the implications of these.

2. School and pupil surveys

This chapter highlights information about:

- Pupil and school survey responses and analysis;
- How engagement in Pathfinder activities was associated with pupil outcomes; and,
- The career-related learning activity in both Pathfinder and comparison schools over the course of the evaluation.

2.1 Overview of data collection and analysis

2.1.1 Number of surveys returned

Tables 2.1 and 2.2 show the number of Pathfinder and comparison schools that took part in the pupil survey and that completed the school questionnaire at each Sweep. Table 2.1 also shows how many pupil surveys were returned at each Sweep. Overall, intended response numbers in the comparison group reflect initial assumptions made about expected sample attrition over the lifetime of the evaluation. The overall aim of sampling being to end with a comparison sample that matched that of the treatment group (in terms of numbers of schools, n=38 and in relation to pupil responses, n=1,539). In the event, as is shown in Table 2.1, achieved responses in the comparison schools exceeded expectations, hence the achieved response numbers from the comparison sample exceed intended numbers. These response numbers were very high across all the Sweeps and perhaps reflect the relevance of this issue for schools. Response numbers also reflect that the use of incentives for participation was successful: schools were provided with school-level feedback from the survey at Sweeps 1 and 3, and pupils were given small gifts for taking part.

Table 2.1 Pupil survey response numbers

Sweep	Pathfinder, number of:				Comparison, number of:			
	schools:		pupil surveys:		schools:		pupil surveys:	
	intended	achieved	intended	returned	intended	achieved	intended	returned
1	38	38	1539	1346	107	124	4333	4199
2	38	38	1539	1369	64	120	2592	4034
3	38	37	1539	1298	38	120	1539	3986

Table 2.2 Number of schools returning school questionnaires

Sweep	Pathfinder schools	Comparison schools
1	35	92
3	32	76

2.1.2 Sample representativeness

At all Sweeps, the Pathfinder and comparison schools that responded to the survey were found to be representative of other primary schools in the seven Pathfinder LAs (see Appendix 4, Table A4.1). The only exception to this was that the Pathfinder schools had a smaller proportion of pupils with English as an additional language (EAL) than other schools in the seven LAs. Pathfinder and comparison schools were both representative of other schools in England in terms of the type of school and percentage of pupils eligible for free school meals (FSM), but were not representative in terms of achievement and the proportion of pupils with EAL. The basic frequencies appendices accompanying this report provide further information about the sample representativeness. Overall, this suggests that the findings are relatively generalisable to similar schools in areas of deprivation, but may not entirely reflect the situations of all these schools.

2.1.3 Pupil characteristics

Table 2.3 shows the number and proportion of pupils from Years 5 and 6 who returned surveys at each Sweep. The majority of the pupils who responded to the survey were in Year 6, which was the primary target Year of the programme.

Table 2.3 Pupil responses

	Year 5		Year 6		Missing data		
Sweep	Number	%	Number	%	Number	%	Totals
1	1216	22.5	4159	77.0	24	0.4	5399
2	1206	23.7	3876	76.1	8	0.2	5090
3	1238	23.4	4035	76.4	11	0.2	5284

2.1.4 Analysis of the survey data

The Pathfinder programme was specifically intended for trial in schools in more challenging circumstances. Selected by participating LAs, and known as Pathfinder/treatment schools, these schools shared characteristics such as higher than average numbers of pupils with Special Educational Needs (SEN) and entitlement to FSM. Therefore, to enable meaningful and sophisticated exploration of data, the approach to analysis had to have the ability to identify impact at both the overall and subgroup levels, while at the same time taking all variables into account and exploring interactions in terms of time, school and individual-level groups[8].

Using factor analysis and reliability analyses, composite factors were created from items in the pupil and school questionnaire, including factors measuring pupil outcomes, such as 'confidence in ability to work effectively' and 'stereotypical

[8] For these purposes, basic frequencies and cross tabulations are not an appropriate analytical method and hence do not form the basis for the analysis which follows (they are presented in full in Appendix 4). Rather, composites and multi-level modelling have been employed to better explore differences within and between groups and change over time. A fuller explanation of these analyses can be found in Appendix 3.

thinking'. These factors were used in multi-level modelling analyses to examine how outcomes changed over time. The analysis is explained in full in Appendix 3, but the approach is outlined below. Tables summarising the results of the multi-level modelling and reliability analyses can also be found in Appendix 3.

The remainder of the Chapter presents only findings that were found to be statistically significant.

Reliability and factor analysis

In discussion with the DfE, items were selected from the pupil survey and school questionnaire to form composites that could be used as variables in multi-level modelling analyses. These composites were then tested by factor analysis and reliability analyses to check they formed coherent factors. The factors that were found to be acceptably reliable and valid were used in the further analyses.

Multi-level modelling analyses

Multi-level modelling was used to examine how pupil outcomes changed over the course of the evaluation and differences in outcomes between Pathfinder and comparison pupils over time. This enabled assessment of how the Pathfinder pilot was associated with pupil outcomes in comparison to usual career-related learning practice in schools at Key Stage 2. The analysis used data collected at Sweeps 1, 2 and 3, and used the factors created in the factor analysis.

Multi-level modelling is a development of a common statistical technique known as regression analysis. This takes into account different background characteristics of schools and pupils, as well as taking account of clustered data, for example, clusters of pupils within schools, and clusters of schools within a LA. In this way, it is possible to see how a variable correlates with the particular outcome when all other factors remained constant. It also makes it possible to look at how a range of individual- and school-level background variables interacted with change in the outcomes over time; that is, the modelling could reveal whether particular groups of pupils changed in different ways. The analysis is fully explained in Appendix 3.

The following pupil survey factors were used as outcomes in the models:

- **Stereotypical thinking**. This measures the extent to which pupils' assessments of people's suitability and success in potential careers are influenced by gender and ethnicity stereotypes.
- **Effectiveness of career-related learning** This measures pupils' views on the effectiveness of school's career-related learning work in terms of informing and preparing them for transition to secondary education and future careers.
- **Perceptions of parents'/carers' aspirations**. Measures pupils' perceptions of their parents/carers aspirations for their future education and the extent to which their parents/carers take an interest in their education.

- **Attitude to learning**. This represents the extent to which pupils have a positive attitude towards learning and school attendance.
- **Confidence in ability to work effectively**. This represents pupils' confidence in their ability to work effectively.
- **Pupils' perceived capability regarding particular types of career**. This measures the extent to which pupils consider themselves able to do various types of jobs in the future. The questions in the survey measuring this were based on the Standard Occupational Classification (SOC) (ONS, 2000). By combining some of the SOC categories, five different categories of jobs were created. For this final analysis, each of the five categories of jobs presented in the pupil survey were looked at as separate outcomes. Specifically, this examined pupils' confidence that they could do each of the following types of jobs in the future:
  - a professional job (SOC categories 1 'Managers and Senior Officials' and 2 'Professional Occupations')
  - an associate professional job (SOC categories 3 'Associate Professional and Technical Occupations' and 4 'Administrative and Technical Occupations')
  - a skilled job (SOC categories 5 'Skilled Trades Occupations' and 6 'Personal Service Occupations')
  - a customer service/operative job (SOC categories 7 'Sales and Customer Service Occupations' and 8 'Process, Plant and Machine Operatives')
  - an elementary job (SOC category 9 'Elementary Occupations').
- **Pupils' aspirations regarding particular types of career** (using SOC categories).

Only pupils who had returned surveys at Sweep 1 and at least at one or both of the remaining Sweeps were included in the modelling. If pupils had data missing on any variables then that was flagged and accounted for in the modelling (see Appendix 3 for further information on the number of pupils entered into the models). The number of pupils entered into the analysis is shown in Table 2.4.

Table 2.4 Pupil survey sample numbers (at final analysis stage)

Data source	Number of cases
Sweep 1 Data	5545
Sweep 2 Data	5403
Sweep 3 Data	*5284*
No Sweep 1 data	*294*
No Sweep 2 data	*195*
No Sweep 3 data	424
All three Sweeps worth data	*4645*
Sweep1 and one another Sweep (Either Sweep 2 or Sweep 3)	*5264*
Number of pupils with NPD data	*5188*
Number of pupils excluded due to mix up of the intervention in one school	*62*
Number of pupils excluded due to propensity scoring	*326*
Number of pupils with school questionnaire data	4256
Final number of pupils used for the MLM analysis	**4876**

School questionnaire factors

The following factors from the school questionnaire were created to measure the extent of career-related learning activity in schools. These factors were not entered into the multi-level modelling – instead differences between Pathfinder and comparison schools in the activities that they were engaged in at Sweeps 1 and 3 were assessed by an ANOVA (see Appendix 3 for a description of the ANOVA analysis).

- **Parental involvement**. This measures the extent to which schools have sought to involve parents/carers in career-related learning activity, through needs analysis and/or in connected activity.
- **Future opportunities**. This measures the extent to which schools have addressed the issue of pupils' aspirations for the future, through needs analysis and/or other career-related learning activity.
- **Confidence and self-belief**. This measures the extent to which schools have carried out a formal needs analysis on pupils' confidence, self esteem and/or self efficacy.

Differences between Pathfinder and comparison schools over time on the following individual questionnaire items were also assessed using ANOVAs:

- Taking pupils on visits to give them new experiences / broaden their horizons; and,
- Using visitors to encourage pupils to explore their aspirations.

The presentation of analysis

Only those data found to be statistically significant are presented and a full tabularised presentation of all significant findings can be found in Appendix 3 and includes unstandardised coefficients and effect sizes (see Tables A3.8 to A3.22). The unstandardised coefficients show the average change in the outcome variable associated with a change of one unit in each of the background variables, taking account of all the other variables in the model. Effect sizes represent the expected change in outcome (expressed as a percentage of the standard deviation in the outcome) for one standard deviation change in the predictor variable.

When presenting significant findings, for ease of comprehension and reading, this report uses the term '*otherwise similar pupils'*. For example:

- Gifted and talented pupils in Pathfinder schools showed greater positive changes in their opinions than otherwise similar pupils at Sweep 3.

This statement implies that at Sweep 3, gifted and talented pupils from Pathfinder schools rated career-related learning effectiveness higher than expected. A question may arise as to what is expected or 'average'; that is who these pupils are being compared against. This comparison is against a typical (or average) pupil. This association can be compared against more than one group of pupils who form the

comparator (or base case). These groups could be defined using various combinations of values attributed to these variables (e.g. gifted and talented, Sweep 3 and pathfinder pupil in this case). Hence, the generic term to define all of these groups could be called 'otherwise similar pupils' which includes all such comparison pupils.

One such way of expressing this is to say that at Sweep 3, the gifted and talented pupils within pathfinder schools rated career-related learning effectiveness higher than their counterparts from comparison schools. This comparison is the most relevant to the research objective than any other comparison that could be deduced from this analysis. Hence, this report will use the phrase 'otherwise similar pupils'.

2.2 The pupil survey and impact on outcomes

2.2.1 An overview

Given the targeted nature of the Pathfinder, encouragingly multi-level modelling (MLM) analysis revealed two significant overall correlations with two composite outcomes; namely, generally Pathfinder pupils showed a greater decrease in stereotypical thinking and a greater improvement in their perceptions of the effectiveness of career-related learning in their school over the evaluation than did comparison school pupils.

Analysis found evidence in the surveys that the Pathfinder pilot was associated with a positive impact on pupil outcomes, especially in terms of closing the gap between more vulnerable pupils and their peers (also, see Chapter 3). Of particular note were the significant associated Pathfinder impacts on particular groups of pupils in the Pathfinder schools, such as boys, pupils with SEN and FSM. Below survey findings are discussed regarding the following:

- The career-related learning activity in both Pathfinder and comparison schools over the course of the evaluation; and,
- How engagement in Pathfinder activities was associated with pupil outcomes.

These important associations indicate, as was intended, that the Pathfinder may be especially beneficial for some more vulnerable groups of pupils and indicates its potential for closing the gap between more vulnerable pupils and their peers on some outcomes. These findings are described further below where each significant finding is discussed in turn.

2.2.2 Pupils' perceptions of the effectiveness of career-related learning

Differences at the general level

At baseline, pupils in Pathfinder schools generally rated the effectiveness of their school's career-related learning more positively than pupils in comparison schools. This lends support to the Pathfinder school headteachers' reports in the school survey

that they were generally more engaged in career-related learning at baseline than comparison schools. In terms of change over time, the evaluation found that:

- At Sweep 2, Pathfinder pupils rated the career-related learning even more positively than they had at baseline, while there was no significant change in how comparison school pupils rated career-related learning activity.
- While generally pupils viewed their school's career-related learning as more effective at Sweep 3 than they had at baseline, there was a significantly greater positive change for Pathfinder pupils.

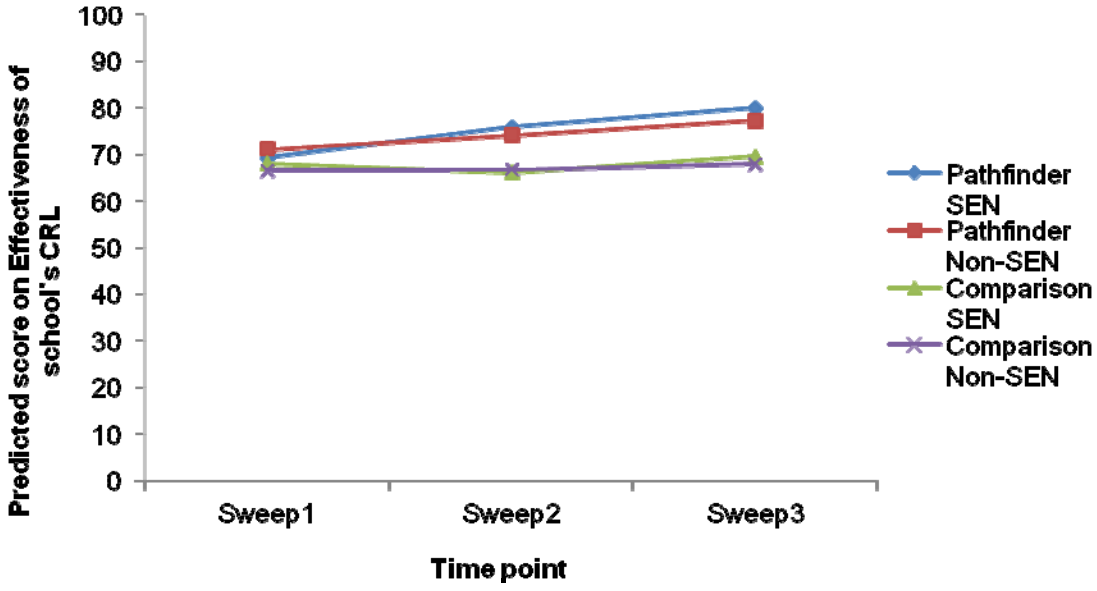
These findings suggest that the Pathfinder schools were offering more engaging forms of career-related teaching than the general approaches used in other schools. For further information about the analysis see Section 2.1 and Appendix 3, Table A3.11.

Differences at the group level

Evidence suggests that some groups of pupils, including those who were more vulnerable, showed particularly greater improvements in their perceptions of their school's career-related learning:

- Gifted and talented[9] pupils in Pathfinder schools showed greater positive changes in their opinions than otherwise similar pupils at Sweep 3; and,
- Pupils with special educational needs (SEN) in Pathfinder schools showed significantly more satisfaction with how their school delivered career-related learning at both Sweeps 2 and 3 than they had at baseline (see Figure 2.1).

Figure 2.1 Change over time in pupils' perceptions of the effectiveness of career-related learning in their school: by SEN



[9] Gifted and talented pupils are those who have one or more abilities developed to a level significantly ahead of their year group (or with the potential to develop these abilities).

The findings for pupils with SEN suggest that, generally, over time such pupils increased their rating of the effectiveness of career-related learning more than otherwise similar pupils did. Further, as Figure 2.1 shows, analysis suggests that the Pathfinder pilot over time was comparatively more highly rated for effectiveness by pupils with SEN compared to their counterparts in comparison schools.

An additional finding relating to pupils' perceptions of the career-related learning in their school, is that overall, Year 5 pupils rated the effectiveness of their school's career-related learning lower at both Sweeps 2 and 3 than otherwise similar Year 6 pupils did, despite there being no differences in perceived effectiveness between these pupils at baseline. Although this finding was not specific to the Pathfinder, the more positive rating of the effectiveness of career-related learning by Year 6 pupils suggests that such activity is perhaps more closely attuned to their needs than those of their Year 5 counterparts. The difference potentially could be due to a greater focus on transition in Year 6. Further, it may reflect that career-related learning was generally concentrated more on Year 6 than Year 5 pupils. For instance, most of the case study schools were delivering the Pathfinder to Year 6 and few were delivering it in Year 5.

2.2.3 Stereotypical thinking

Differences at the general level

According to Gotfredson (2002), children begin to form stereotypes about occupations, including gendered roles, when they are around six to eight years old. These stereotypes can influence their ideas about the jobs that they might be able to do in the future. Based on this, one of the main aims of the Pathfinder pilot was to challenge stereotypes – particularly gendered stereotypes – around career choices at an early age and thus increase pupils' awareness of the occupations that are open to them. The findings from the pupil survey suggest that the Pathfinder pilot has been successful in achieving this aim. For further information about the analysis, see Section 2.1 and Appendix 3, Table A3.10.

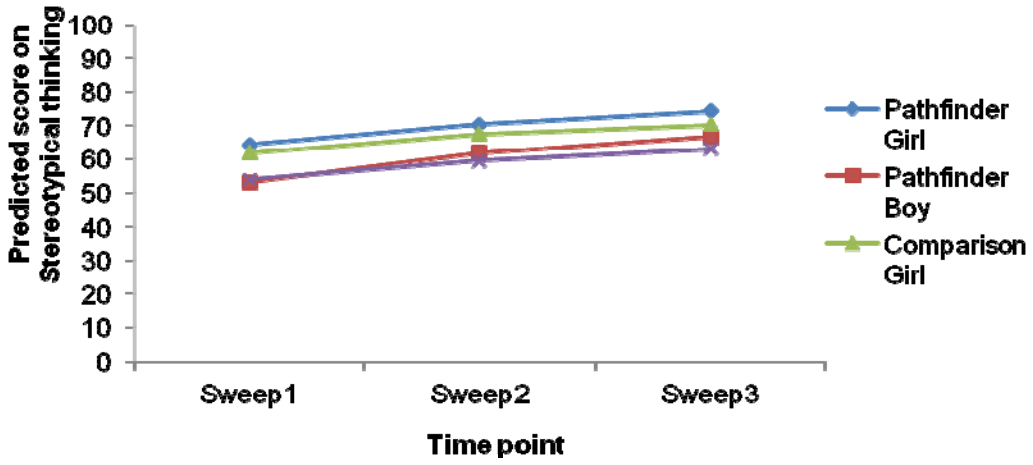
Pupils generally showed less stereotypical thinking at Sweeps 2 and 3 than they had at baseline, but Pathfinder pupils showed significantly greater improvements than those in comparison schools at both Sweeps 2 and 3. The findings indicate that involvement in the Pathfinder pilot could be associated with greater decreases in pupils' stereotypical perceptions beyond that seen with usual career-related learning delivery in schools at Key Stage 2.

Differences at the group level

Some groups of pupils, including boys and those eligible for FSM, had held significantly more stereotypical beliefs than otherwise similar pupils at baseline. Girls and pupils who were gifted and talented tended to hold significantly less stereotypical beliefs than otherwise similar pupils. When looking at how these groups had changed across time, the evidence suggests a significant difference in the extent to which boys' and girls' level of stereotypical thinking changed over the evaluation: boys in

Pathfinder schools made greater improvements than otherwise similar pupils (see Figure 2.2). This is likely to be due to boys holding greater stereotypical beliefs at baseline – thus there was more room for improvement in boys' beliefs than girls'. The study did not find any further impact for other groups, but the findings suggest that the Pathfinder pilot may particularly help address some of the stereotypes held by boys.

Figure 2.2 Change over time in pupils' level of stereotypical thinking: by gender



Note: An increase in the predicted score on stereotypical thinking means that pupils showed improvement in stereotypical thinking across time – that is, they became *less* stereotypical in their thinking.

2.2.4 Increasing pupils' confidence and closing the gap

Differences at the general level

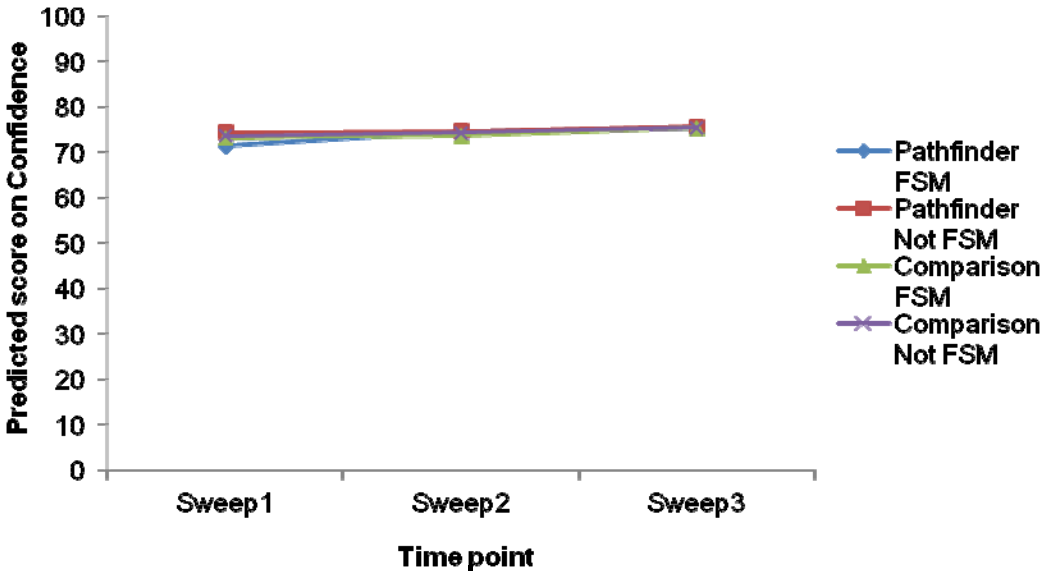
Generally (in Pathfinder and comparison schools) pupils became significantly more confident in their ability to work effectively between baseline and Sweep 3 (this change was not statistically significant at Sweep 2). Compared with otherwise similar pupils, those with EAL showed the greatest increase in confidence at Sweep 3 (change at Sweep 2 was not statistically significant). There were, however, no general significant differences between the Pathfinder and comparison pupils over time, suggesting that what all schools were doing in terms of career-related learning may have benefited pupils' confidence or that changes in confidence were naturally occurring over time. For further information about the analysis, see Section 2.1 and Appendix 3, Table A3.8.

Differences at the group level

Although the study did not find evidence that the Pathfinder pilot differentially improved all pupils' confidence, analysis at the subgroup level revealed that it was associated with benefits to pupils eligible for FSM (see Figure 2.3). At baseline, pupils eligible for FSM in Pathfinder schools had lower confidence than all otherwise similar pupils. By Sweeps 2 and 3, Pathfinder FSM eligible pupils showed a greater improvement in confidence than all otherwise similar pupils. This finding is

represented in Figure 2.3, which shows that these pupils had caught up with their peers by the end of the evaluation. These findings suggest that for FSM eligible pupils, taking part in the Pathfinder pilot was associated with a closing of the gap in confidence between them and otherwise similar pupils over time.

Figure 2.3 Changes over time in pupils' confidence in their ability to work effectively: by FSM-eligibility



2.2.5 Parental aspirations and the challenges of engaging parents/carers

Generally, pupils felt that their parents/carers had higher aspirations for them at Sweep 2 than had been the case at baseline. This change, however, was not significant at Sweep 3, suggesting that this was not sustained over time. There was no difference between Pathfinder and comparison schools on this outcome over time. For further information about the analysis, see Section 2.1 and Appendix 3, Table A3.12.

These findings suggest that both the Pathfinder pilot and usual teaching of career-related learning in schools were not associated with sustainable increases in perceived parental aspirations for their children – although what both types of school were doing may have had a short-term impact on pupils' perceptions of their parents'/carers' aspirations for them. As discussed above, the school questionnaire data, collected from headteachers, indicated only a small difference between Pathfinder and comparison schools in terms of whether or not they engaged parents/carers in career-related learning and that not all Pathfinder schools were doing this. This may explain why the evaluation did not find any significant differences between Pathfinder and comparison schools on this outcome over time.

These findings, and the case study findings, point to the challenges involved in engaging parents/carers in Pathfinder-related activity. However, as the case studies indicated, where schools had been successful in doing this there had sometimes been a profound personal impact for some parents/carers (see Chapter 3), suggesting that at an individual-level the Pathfinder pilot had had a positive impact on some parents/carers.

2.2.6 Attitude to learning

Generally, at both Sweeps 2 and 3, pupils showed slightly less positive attitudes to learning compared to baseline. Pupils eligible for FSM showed a significantly greater decline in their attitude to learning at Sweep 3 than otherwise similar pupils (there was no statistically significant difference at Sweep 2). No significant relationship was found between pupils' involvement in the Pathfinder pilot and their attitudes to learning. For further information about the analysis, see Section 2.1 and Appendix 3, Table A3.9.

Analysis of the data cannot explain why pupils' attitudes towards learning had generally declined across time, but it may be that as pupils become older they become slightly less positive about learning. Indeed, research suggests that there is often a dip in pupils' academic motivation around the transition from Key Stage 2 to 3 (Morris and Pullen, 2007) and the slight decline in pupils' attitudes to learning that were found may partly reflect this as some of the pupils approached transition to secondary school. While these survey findings indicate that the Pathfinder pilot may on average not have affected this outcome in the short-term, it is possible that effects could become apparent later in the pupils' educational careers. Further, the case study findings indicated many individual cases where teachers and pupils felt that the programme had had a positive impact on pupils' attitudes to learning. This suggests that at an individual-level, as with parental aspirations, there were some cases where the programme had been perceived to be beneficial to this outcome.

2.2.7 Raising aspirations and extending horizons

Jobs pupils would like to do

Although, the extent to which the pupils had thought about their futures did not change over time, the kinds of careers they were considering did. The pupils were asked in an open-ended question what they would like to do in the future and their responses were coded into the Standard Occupational Classification ((SOC) Office for National Statistics, (ONS), 2000) categories. Table 2.5 shows proportions of pupils in Pathfinder schools and comparison schools who indicated that they would like to do a professional job or an associate professional job during each of the three surveys. Over the evaluation, a greater proportion of pupils in both Pathfinder and comparison schools stated that they would like to do a professional or associate professional job. In particular, there was an increase in the proportion of pupils in Pathfinder schools who were considering an associate professional job. However, the proportion of Pathfinder pupils who were considering a professional job was significantly lower

than that of the comparison group through all Sweeps. For further information about the analysis, see Section 2.1 and see Appendix 3, Table A3.13 to A3.22.

Table 2.5 The types of jobs pupils wanted to do

	Professional job		Associate professional job	
Time	Pathfinder	Comparison	Pathfinder	Comparison
Sweep 1	27%	32%	47%	51%
Sweep 2	29%	35%	51%	55%
Sweep 3	30%	35%	55%	54%

Multi-level modelling was used to assess how pupils' thoughts about whether they *would like to do* a job from each of the five SOC categories created changed over time. Along with looking at how background characteristics were related to this, analysis also looked at how pupils' level of stereotypical thinking was associated with what they wanted to do over time.

At baseline, pupils who were found to have been less stereotypical in their thinking[10] were significantly more likely than otherwise similar pupils to want to do a professional level job and were significantly less likely to want to do an associate professional job, a skilled job, a customer service/operative job and an elementary job. Over time, the evidence did suggest that some pupils had changed their thoughts about what they would like to do in the future, but changes in stereotypical thinking were not significantly associated with this. This suggests that factors other than changes in their stereotypical thinking might have been related to their changing thoughts about what they would like to do.

There were not any overall significant differences between Pathfinder school and comparison school pupils in how their thoughts changed over time about the types of jobs that they might like to do in the future. All pupils, for instance, by Sweep 2 were significantly less likely to want to do a customer service/operative job or a skilled job. There were some differences, however, between girls, Year 5 pupils and pupils with below average Key Stage 1 results in Pathfinder schools and otherwise similar pupils. For example:

- By Sweep 2, girls in Pathfinder schools were significantly less likely to say they would like to do a skilled job or a customer service/operative job than otherwise similar pupils;
- By Sweep 3, girls in Pathfinder schools were significantly less likely to say they would like to do a customer service/operative job or an elementary job than otherwise similar pupils;

[10] See Section 2.1 for full explanation of analysis and composite created as outcome measures. This measures the extent to which pupils' assessments of people's suitability and success in potential careers are influenced by gender and ethnicity stereotypes.

- By Sweeps 2 and 3, Year 5 pupils in Pathfinder schools were significantly more likely to want to do a professional job than otherwise similar pupils;
- By Sweep 3, Year 5 pupils in Pathfinder schools were more likely to want to do an associate professional job, a skilled job, a customer service/operative job and an elementary job than otherwise similar pupils; and,
- By Sweep 3, pupils with below average attainment at Key Stage 1 in Pathfinder schools were less likely to want to do an associate professional job.

Overall, these results suggest that the Pathfinder programme may have contributed to changing the thoughts of girls, Year 5 pupils, and pupils with lower attainment about what they might like to do. In particular, by Sweep 3, girls were less likely to want to do jobs from the lower SOC categories – although there is no evidence that there was a corresponding increase in their wish to do jobs from higher SOC categories. This suggests that the programme may have helped girls to narrow down their career choices rather than to raise their aspirations. Conversely, by Sweep 3, the Pathfinder programme was associated with Year 5 pupils showing interest in a wider range of career options than they had at baseline.

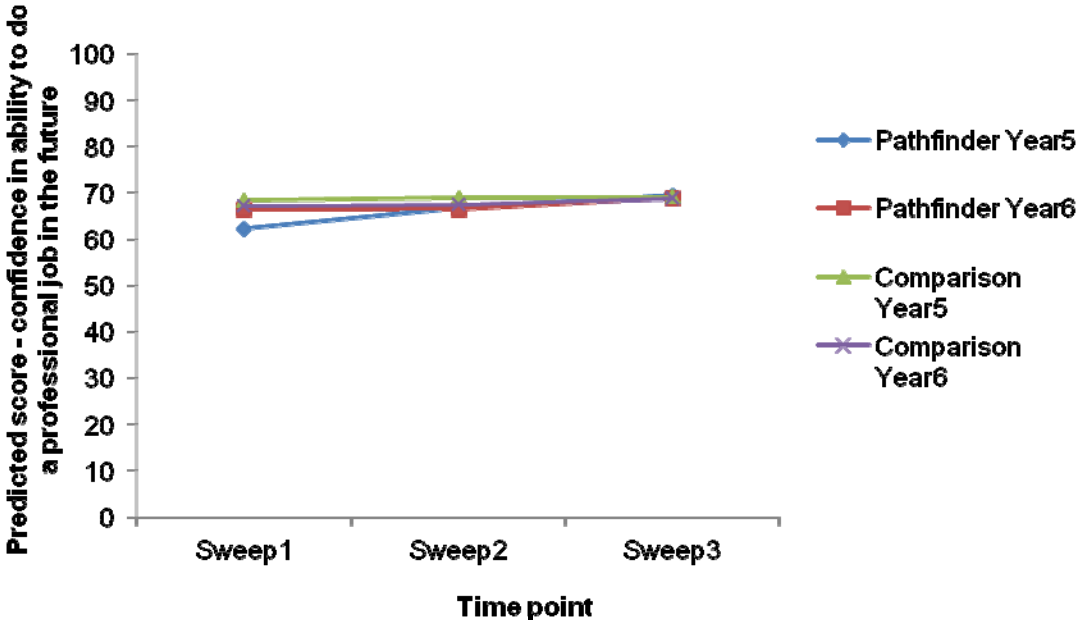
Jobs that pupils thought that they could do

In addition to looking at the impact of the Pathfinder on what pupils said they would *like* to do in the future, the evaluation also looked at what pupils felt that they *could* do. That is, the options and jobs that they felt would be open to them or that they felt they would have the ability to do in the future. Here it is worth pausing to consider the difference between 'raising aspirations' and 'extending horizons', as discussed in Chapter 3. The Pathfinder pilot partly aimed to widen pupils' educational and career aspirations, but also, at an early age, to widen their awareness of the possibilities in the future. As the case study findings indicated, some of the LA personnel and teachers interviewed felt that *'broadened horizons'* may be a more accurate reflection of the Pathfinder's impact than *'raised aspirations'* and that the term 'raising aspirations' carried with it a value-judgement. The impact of the programme on what pupils thought they might be able to do in the future, is considered.

Multi-level modelling was used to look at whether pupils' perceptions of whether they *could do* a job from each of the five categories created from the SOC changed over time. At baseline the results show that girls, pupils classed as gifted and talented, and Asian and Black pupils were more confident about their ability to do a professional level job in the future than otherwise similar pupils, while those who with a SEN, below expected attainment at Key Stage 1 or who were in Year 5 were less confident. By the end of the evaluation, pupils had on average become more confident about their capabilities to do jobs across all levels of the SOC. There were no overall differences between Pathfinder and comparison pupils in how their confidence changed across time, but some groups of pupils in the Pathfinder schools experienced significantly greater increases in confidence than otherwise similar pupils:

- Between baseline and Sweep 2, pupils eligible for FSM and pupils in Year 5 (see Figure 2.4) in Pathfinder schools showed a significant increase in confidence in their ability to do a professional level job in the future. As seen in the Figure 2.4, based on the model, there is a small difference between the pupils eligible for FSM in Pathfinder schools and the other groups[11].
- Between baseline and Sweep 2, boys in Pathfinder schools showed a greater increase in confidence than girls in Pathfinder schools that they could do a skilled job in the future (this difference was not sustained at Sweep 3); and,
- Between baseline and Sweep 3, Pathfinder Year 5 pupils showed a greater increase in confidence in their ability to do a professional or a skilled job.

Figure 2.4 Changes over time in Year 5 and 6 Pathfinder and comparison school pupils' perceptions that they could do a professional level job in the future



These findings suggest that the Pathfinder pilot is associated with widening perceptions of what pupils think they might be able to do when they grow up among some groups of pupils. It might especially help disadvantaged pupils feel that professional occupations are open to them and help close the gap between them and their peers in their perceived options for the future.

Taken together, these findings provide some evidence that the Pathfinder pilot helped to widen pupils' understanding and aspirations around what they could do in the future. Research by Atherton et al. (2009) suggests that many pupils at the start of secondary school will have relatively high aspirations for the future, and that the

[11] This difference is statistically significant and therefore plotted on a vertical axis which reflects the actual scale of the outcome variable (0-100) (this difference was not sustained at Sweep 3).

challenge lies not in raising these but in developing their understanding of pathways to take to get the jobs they want. One of the aims of the Pathfinder was to increase pupils' understanding of the link between education, qualifications and opportunities. In the survey, pupils were asked one question about this: whether they agreed with the statement '*When I leave school… I will have more choices if I have done well with my schoolwork*'. The majority of all pupils agreed or strongly agreed that they would at baseline (87 per cent and 86 per cent, respectively, for Pathfinder and comparison pupils) and this proportion did not change over time. The surveys provided no further quantitative evidence about pupils' understanding of the link between education and future opportunities, but the case study findings suggest that the programme had helped some pupils develop a deeper understanding of what they needed to do to achieve their future aspirations (see Chapter 3).

2.3 The school questionnaire and career-related learning

Evidence gathered from the school questionnaire, showed that Pathfinder schools reported being rather more engaged in career-related learning activity at baseline than did comparison schools and this was a statistically significant difference[12]. Data from the school questionnaire showed that Pathfinder schools reported, on average, already involving parents/carers in career-related learning and considering parental involvement in their career-related learning needs analysis to a greater extent than did comparison schools. The Pathfinder schools were also doing statistically significantly more to address pupils' aspirations for the future. The higher level of activity in Pathfinder schools at baseline may be because, as was found in the case studies, Pathfinder schools were delivering some elements of career-related learning before the Pathfinder pilot (formally) began and that they were already strongly committed to career-related learning.

2.3.1 Parental engagement and involvement

At the end of the evaluation, at Sweep 3, Pathfinder schools still reported that they engaged parents/carers in career-related learning to a significantly greater extent than did comparison schools. The difference in parental engagement, however, was small and the numbers shown in the basic frequencies appendix suggest that not all Pathfinder schools had involved parents/carers in career-related learning. While it is encouraging that some schools were doing this, these findings suggest that not all Pathfinder schools had been successful in engaging parents/carers in the programme. As discussed in Chapter 3, the case studies identified that this had been a particular challenge for some Pathfinder schools.

[12] In order to establish whether there was a difference between Pathfinder and comparison schools in the extent to which they were engaged career-related learning activities at Sweeps 1 and 3, we ran significance tests (ANOVA analyses). These tests used the mean scores for each of the measures created from the questionnaire data. Background characteristics were not taken into account in these analyses.

2.3.2 Visits and encouraging pupils about their futures

At Sweep 3, Pathfinder schools reported taking pupils on visits and offering encouragement about their futures to a significantly greater extent than did comparison schools. For example, as the data in the basic frequencies appendix shows, all of the Pathfinder schools reported that staff took pupils on visits compared with four in five comparison schools. Further, all Pathfinder schools reported that their staff encouraged pupils to raise their aspirations compared with around nine in ten comparison schools. As there had been no difference between the schools at baseline, the greater engagement in trips and increase in encouragement for pupils in Pathfinder schools is likely to have been a result of the Pathfinder intervention.

2.3.3 Carrying out a career-related learning needs analysis

As part of the Pathfinder pilot, schools were expected to conduct a formal analysis of the career-related learning needs of their pupils to help them tailor the programme accordingly. There was no evidence of any statistically significant differences between Pathfinder and comparison schools in the extent to which they reported that they had carried out a needs assessment of pupils' confidence, self-efficacy and self-esteem. Further, as the basic frequencies appendix shows, few of the Pathfinder schools had carried out a needs analysis of other aspects of pupils' personal development, particularly parents'/carers' attitudes and aspirations for their children's futures. These findings suggest that not all of the Pathfinder schools had carried out a needs assessment.

2.3.4 Summary – career-related learning activity in schools

Overall, evidence suggests that there was a greater amount of career-related learning activity in Pathfinder schools than in comparison schools during the evaluation, especially in terms of:

- Engaging parents/carers;
- Taking pupils on visits; and,
- Staff offering pupils encouragement about their futures.

It should be noted, however, that many comparison schools were also engaged in some career –related learning activity in Key Stage 2.

2.4 Summary of quantitative survey findings

Overall, the survey data indicated that the Pathfinder pilot was correlated with a positive impact on career-related learning and pupil outcomes in primary schools in a number of ways:

- The Pathfinder intervention was associated with an increase in career-related learning activity in these schools in comparison to what other similar schools were

doing. Few schools, however, had engaged parents/carers in the Pathfinder pilot and this is a challenge that could be addressed if the programme continues.

- The Pathfinder was associated with improvements in pupils' perceptions of the effectiveness of career-related learning they took part in at school. The findings for pupils with SEN are especially noteworthy and suggest that, generally, over time such pupils increased their rating of the effectiveness of career-related learning more than did otherwise similar pupils. Further, analysis suggests the Pathfinder pilot over time was comparatively more highly rated for effectiveness by pupils with SEN compared to their counterparts in comparison schools.
- Pathfinder pupils showed significantly greater improvements in terms of reduced stereotypical thinking than those in comparison schools at both Sweeps 2 and 3. The findings indicate that involvement in the Pathfinder pilot could be associated with greater decreases in pupils' stereotypical perceptions beyond that seen with usual career-related learning delivery in schools at Key Stage 2. The Pathfinder may especially have been successful in decreasing stereotypical thinking among pupils about the jobs that they could do in the future, and closing the gap between disadvantaged pupils and their peers in terms of their confidence in their ability to work effectively and their choices for the future.
- At baseline, pupils eligible for FSM in Pathfinder schools had lower confidence than all otherwise similar pupils. By Sweeps 2 and 3, Pathfinder FSM eligible pupils showed a greater improvement in confidence than all otherwise similar pupils.
- There was some evidence that the Pathfinder had helped to raise pupils' aspirations for the future and extend their horizons about what they could do in the future, for instance:
  - Between baseline and Sweep 2, pupils eligible for FSM and pupils in Year 5 (see Figure 2.4) in Pathfinder schools showed a significant increase in confidence in their ability to do a professional level job in the future (this difference was not sustained at Sweep 3);
  - Between baseline and Sweep 2, boys in Pathfinder schools showed a greater increase in confidence than girls in Pathfinder schools that they could do a skilled job in the future (this difference was not sustained at Sweep 3); and,
  - Between baseline and Sweep 3, Pathfinder Year 5 pupils showed a greater increase in confidence in their ability to do a professional or a skilled job.

3. The case studies: context, implementation and impact of the Pathfinder pilot

3.1 Why did schools become involved?

As described in Chapter 1, the Pathfinder case study schools shared a very similar background in terms of their social context, as all were in urban areas of disadvantage. The headteachers and teachers who were interviewed during the first round of Pathfinder school visits were therefore very committed to the aims of the programme and confident that they could tailor the programme to the particular needs of their schools and pupils, in order to gain the maximum benefit from it.

When school interviewees were asked about the expected outcomes from the Pathfinder, all looked beyond raising aspirations and spoke in the same way about a more complex vision of *'broadening limited horizons'*, *'breaking the cycle of deprivation'*, and *'increasing confidence, self-esteem and resilience'*. All this was considered necessary because staff views of their pupils' aspirations were that they were generally low, that if they did have aspirations, these tended to be unrealistic, that the media generally exerted a malign influence and that they suffered from poor family role models and lack of confidence and experience, as this headteacher explained:

> *Many of the families are third generation unemployed and the pupils have very limited horizons. They have no experience of higher education and are not ambitious. We need to build their resilience, as they will meet barriers in families that are not interested in education. There's a gang culture and social problems on the estate and they are liable to fall out of education and become NEET* (not in education, employment, or training).

3.1.1 Implementation of the Pathfinder pilot

During the first visits to the case study schools, it was apparent that staff intended to build elements of the programme into the curriculum, and that this would underpin delivery, while particular events, or 'high profile ' activities, such as a visit to a university or workplace, or a drama presentation, would provide highlights and focus learning.

The second round of visits revealed that all the schools had been involved in more activity on the Pathfinder than they had originally anticipated. In one school, the teacher explained how the curriculum work had expanded from the planned six lessons to 15, as it had *'gained momentum'*.

Curriculum integration

Integration of elements of the Pathfinder into the curriculum was the basis of implementation in all the case study schools, although there were a variety of ways in which this had been approached. For example, there were four schools where the

Make It Real Game had been used. This is a role-playing resource to assist in the teaching of citizenship and Careers Education and Guidance (CEG) in Years 6 and 7, and is designed to help pupils see the connections between education, work and lifestyle. In the schools where this had been used over a period of time, it was regarded as having been very useful, particularly in developing group work and decision-making skills. One school had used it for a short, but concentrated period, and the teachers here were more critical of its usefulness, as they considered it to be outdated, and pupils from this school found the game too complex: *'I wasn't keen on the Make It Real Week. It was difficult to understand it because you are young'*.

The development of cross-curricular work was reported by teachers and headteachers as having been both a useful way of delivering the Pathfinder, and also a valuable outcome in terms of curriculum enhancement. In addition to the examples given above, where visits could be combined with classroom work on science, or history, it was also possible to build in work on literacy and numeracy. Teachers described the value of pupils writing letters to organisations in order to set up visits, or to thank visitors, and of having to work out the cost of visits. In some schools, particular links were made with curriculum work on enterprise education and personal finance education. In one school, the visit of a chef from a prestigious local restaurant had not only given the pupils insight into this career area, but had also tied in with work on healthy eating.

Curriculum development had therefore been a beneficiary of introducing the Pathfinder and in one particularly interesting example, the headteacher described how career-related learning had been '*totally immersed into the curriculum'*, and that this model would now be extended throughout the school, as it provided the experiences and skills which the pupils needed. The manner in which the Pathfinder had been implemented in this case study school, and its impact are described below:

The headteacher explained that the Pathfinder:

> *Fits very well with our School Improvement Plan and we want to do this wholeheartedly and not just dabble. We need to open their* [the pupils'] *eyes to the possibilities and help them develop independent learning strategies and investigative and team-work skills'.*

The Year 5 class made a series of visits in the local community, such as to the shopping centre, an old people's home and a boxing club, where they carried out interviews with people about the nature of their current work and what types of work had been available to people in the past. These interviews were filmed and recorded and made into a documentary on DVD, and this was shown to other schools and members of the public at a presentation at the Town Hall.

The pupils had also been involved in sessions on personal presentation, and mock interviews, in order to provide them with additional skills, and Connexions staff had done aptitude tests to assist the process of thinking about the future, and support the aim of raising aspirations in a realistic way. The headteacher emphasised that this was necessary in order to *'counter the X Factor influence'.*

Teachers reported that the career-related learning-based curriculum had already expanded views, and raised standards and attainment, and there was optimism that further and higher education would for the first time, become a consideration by the majority of pupils.

The impact on the curriculum had been profound, as the headteacher explained:

> *It's completely revolutionary the way we now deliver the curriculum. It has been amazing and had a huge impact – career-related learning is very comprehensive here, because it is totally immersed into the curriculum: it's the Golden Thread and the curriculum is experiential and outcome-driven.*

Staff interviewed here considered that the Pathfinder had led to better curriculum coherence, with the linking of subjects and skills and there was an intention to not only embed career-related learning lower down the school into Years 3 and 4, but down into Key Stage 1, for example, by taking pupils on public transport to explore their city centre.

Curriculum development had also led school staff to feel more empowered, as they had developed a curriculum model that suited their circumstances, and, according to the headteacher, they had risen to the challenge of *'kicking support away'.* This could be considered to fit well with a policy of greater autonomy for schools, and trusting staff to know what is best for their pupils.

Visitors to school

Bringing visitors into their schools, who were able to give pupils an insight into types and ranges of careers, was an element of the Pathfinder pilot that had been woven into the curriculum in all the schools, and was regarded by all as very successful. This was evident from the interviews conducted with groups of pupils, as they clearly remembered these visitors and the information and ideas that they had gained from them. This particular element had been arranged by schools in a way that had helped to meet many of the aims of the Pathfinder pilot – not only did visitors provide insight into particular careers, they could also be role models, provide motivation and open up new areas of interest. Some schools, for example had used visiting speakers for countering gender stereotyping, and the appearance of a male nurse or female engineer who could talk engagingly about their work seems to have had an impact which a general discussion around the topic would not have achieved. One Year 6 boy's first comment at the time of the second visit was: *'We've had lots of interesting people coming to talk to us, like the male nurse'*. In another school, a girl had decided that after a visit from a female forensic scientist, this was a career she was now interested in and added *'I'm working harder in science now, because I know that I need to be good at it'*.

Opening up the eyes of pupils to careers they had never heard of was an aim of these visits. In one school, the teacher commented on how a number of visitors from the construction industry had included a quantity surveyor, as well as the more obvious roles, and how the pupils had been intrigued by this.

The manner of presentation to the pupils had also been well-planned. For example, from a group of medical students who not only talked about their career choice, but had brought equipment in to show the pupils, or from telecommunications engineers who brought examples of telecommunications engineering tools so that pupils could see some of the practical skills required. This had made an impression on the pupils, who referred to such activities as an example of what they remembered about the Pathfinder.

External school visits

Visits out into the local area and particular workplaces had also been used in all the schools in an imaginative way. A common theme reported by case study school staff was how little contact many of their pupils had with the wider area in which they lived. Despite being only a few miles from the centre of large cities, many pupils never ventured outside their own neighbourhood. Consequently, not only did they have a very limited idea of the types of work that existed within reach of them, but also missed out on the cultural opportunities and historical interest of their locations. Pupils spoke enthusiastically about their visits to particular areas of their city and of the variety of types of work they had seen there. An introduction to the museums, theatres, and even venues which combined entertainment with scientific background, such as an aquarium, could therefore provide career ideas and generally broaden pupils' experiences. Although it would be easy to dismiss the pupils' enthusiasm for these visits as the result of their novelty value, they had also succeeded in broadening

their views of the types of employment available in their areas and made them more aware of what opportunities were outside their immediate neighbourhoods (the impact is discussed in more detail in the next section of this chapter, Section 3.2).

'High profile' activities, such as the opportunity to **take pupils to visit a university,** was an aspect of implementation that appears to have been particularly successful for the five schools that took it up. The visits provided an insight into higher education which school staff thought had been very valuable because they involved meeting university students and taking part in activities. For example, in one school the teacher explained how the pupils had interviewed university students, toured the accommodation and had been able to use the gymnasium facilities, so that they had acquired a more rounded picture of student life, and in another, the teacher described how the pupils had a student mentor, and how effective this personal communication had been. Teachers also reported the impact on pupils of this contact with higher education and of how it had made some of them consider, for the first time, the possibility of applying for a university course. Pupils in group interviews not only spoke enthusiastically of these visits and what they had seen and done there, but also confirmed that this had made some of them consider higher education as a future possibility. From the teachers' point of view, there was an acceptance that the higher education route would not be suitable for all their pupils, but these visits had at least opened the pupils' eyes to future possibilities and helped to expand their experience.

Transition

Transition was integrated with Pathfinder activities in some way in all the schools, most obviously between Year 6 and secondary school, but also moving from Year 5 into the final Year of primary education, and looking beyond Year 7 to option choices in Year 9 and post-16 routes. In one school for example, the Year 6 pupils had not only visited the neighbourhood secondary school on several occasions, but had been involved in a mentoring scheme with Year 9 pupils, who had explained the option choice system to them. As a result, the primary pupils had a much clearer view of what decisions about their future would be required of them within a few years than would normally have been the case, and their teacher felt that this was likely to increase their motivation when they transferred to secondary school.

One-off events

In four schools, **a drama presentation** had been used to develop pupils' understanding of future prospects and the importance of careful decision-making. These events were also seen as ideal opportunities to engage with parents/carers and attempt to raise their awareness of the nature of their supportive role in their children's future. In one school where the impact of the drama work was considered to have been particularly powerful, the teacher explained that the drama *'gave the message to parents about how important their attitude was, and the contrast between giving their children positive and negative messages'*. After a day conducting workshops with the pupils around the themes of ambitions, dreams, goals and transition, which were filmed and made into a DVD, the pupils had the opportunity to work with professional actors in the evening performance. The pupils interviewed

were very positive about their involvement in the drama element and the parents interviewed from this school also confirmed the teacher's view that it had made a strong impact. A representative of the theatre company, who was interviewed as an external partner in the Pathfinder pilot, commented on the effectiveness of the way that both pupils and parents had picked up the messages from the drama:

> *The main message for parents was that they needed to support the aspirations and dreams of their children and it was their responsibility to help every step of the way. Our aim was to get the message across without being patronising.*

In some schools, there had been **particular events** that had been used to support the Pathfinder, or to link in with it, such as a Community Day, or an Enterprise Week. These integrated enterprise learning with the Pathfinder pilot, and involved parents/carers and the local community. As a conclusion, all the schools had also used celebratory events, which often took the form of a 'graduation' ceremony, to boost the pupils' self-esteem and emphasise the importance of their participation in the Pathfinder.

3.1.2 Support and Pathfinder resources

LAs were provided with up to £60,000 in funding which they could use with their five or six participating schools as they wished. In most cases this funding was used for specialist support, for example, from a Connexions Adviser, or Drama Company, and for covering the expenses of pupils' visits. School staff interviewees were not specifically asked about financial support, although in some cases this was raised in relation to sustainability (see Section 3.4).

Interviewees in the case study schools were generally satisfied with the nature of the support that they had received in implementing the Pathfinder. At the time of the first visits, school staff had made it clear that they wanted to take advantage of the flexibility and freedom to implement the Pathfinder pilot in a way that suited their particular circumstances and needs, with the opportunity to draw on support when it was required, whether from their LA, or at national level. The only specific training support that was expected at the time of the first visits was for drama presentations, where these were used, and for using the Make It Real Game resource. One headteacher made the point that schools preferred to seek support only if it was required and that *'anything more would be intrusive'*. Staff who were interviewed at the time of the first visits were all experienced teachers, who were confident about delivering the Pathfinder and managing its expected challenges.

A headteacher interviewed during the second visits, expressed his satisfaction that his school had been provided with *'enough structure to give a framework, but also allow creativity'*, and this reflected the view of the other schools. The school staff had found their LAs helpful when support was required – in one school for example, there was particular praise for the *'excellent support'* provided by an adviser from the Connexions Service, and Connexions assistance had also been important in other areas. As would be expected, responses on support sometimes varied according to

individual school circumstances, so for example, in one school, support from the local Education Business Partnership (EBP) had been particularly valued, while in another the EBP was perceived as having found it difficult to adapt to working with a primary school, because their experience was usually in the secondary sector.

Support from the consultants appointed at national level was widely praised by school staff who had used their expertise. In the two schools that did not appear to have had much contact with the consultants, this was not seen as a problem.

Teachers had generally produced their own resources where necessary, and in one school a set of resources had been created for all the participating schools in the area to use. The Make It Real Game was regarded in one school as a particularly useful curriculum resource, whereas in another, teachers felt that they had spent valuable time adapting a resource that they considered *'dated'*. This suggests that much depends on personal preference and the manner in which this resource is used.

The view from LA representatives on the support that they had received were broadly similar and with the same variation of response. For example, although one view was that the national events held in London had been useful, another was that they had used up financial resources that could have been put to better use. In two areas reference was made to disappointment that an ICT system which would have provided a 'platform' for the sharing of career-related learning resources had not materialised, or at least not at a time when it would have been useful.

As regards staff development, teachers who had been involved in the Pathfinder considered that they had benefited in terms of their own professional development and would be able to cascade their knowledge and successful approaches to other staff in future (see Section 3.2.2 for impact on teachers). Overall, the view of school interviewees was that they had expected the freedom to develop the Pathfinder pilot as it best suited their needs, this had been achieved, and that if they had required specialist input or assistance, this had been available.

3.2 Impact of the Pathfinder

3.2.1 Impact of the Pathfinder in relation to the original aims

In the views of case study respondents, the Pathfinder had a positive impact on pupils' skills and confidence, had extended their understanding of the workplace and the future routes that might be available to them, and enabled a better understanding of the link between their progress at school and their future career choice. These impacts are discussed in more detail in this section, and the various impacts are grouped under sub-headings relating back to the four original aims of the Pathfinder.

Aim 1: Increasing pupils' awareness of career/work opportunities

Raising aspirations

The main aim of the Pathfinder was to raise pupils' aspirations for future education and career options and broaden their horizons through the provision of career-related learning in school during Key Stage 2. The evidence from the surveys, as reported in Chapter 2, was that during the course of the pilot programme, there was a particular increase in the confidence of pupils eligible for FSM in Pathfinder schools. Evidence from the case studies, although not quantifiable, also indicates that this broadening of horizons and increase in confidence in their ability to aspire to a wider range of careers had been achieved.

Given pupils' social circumstances, some pupils in the focus groups had high aspirations before the Pathfinder had started, with pupils saying that they wanted to have professional jobs, including doctors, lawyers, vets and accountants. However, other pupils could be perceived either to have had unrealistic aspirations, with boys in each focus group saying that they wanted to be professional footballers, or limited horizons, as illustrated by the following pupil's comment:

> *I'd like to work at* [a supermarket] *because my Mum's Mum is there, my Dad is there, my Mum's Dad is there, my auntie Sarah. I want to carry on a family tradition.*

The term 'raising aspirations' was however, viewed as judgemental by some interviewees, as a LA officer explained:

> *I think it implies that people don't have aspirations, and also that a particular aspiration is of more value than another. I think from our point of view it's about quality assuring and double-checking that people have aspirations and know what to do in order to achieve them; that those aspirations are realistic and achievable and they have a backup plan.*

Broadening horizons

'Broadened horizons' was therefore considered to be a more accurate reflection of the Pathfinder's impact than 'raised aspirations,' as reflected by the following comment from a teacher:

> *I'd say that a lot of our children already had reasonably high aspirations, but it has certainly broadened their attitudes and made them more open to different possibilities.*

In particular, teachers considered that pupils had **increased awareness, knowledge and understanding of different types of employment,** and had a greater understanding of different roles within businesses; for example, that in a shop there is a far broader range of jobs than working on the tills, or that a radio broadcasting studio involved much more than playing records. School staff felt that pupils were thinking more realistically and broadly about their futures, so that, for example,

becoming a vet was not the only goal if a pupil wanted to work with animals. As a result of Pathfinder activities, pupils reported that they now had lots of new ideas and *'backup plans'* which they said they did not have in the past. For example, one boy said that although becoming a professional footballer remained his main ambition, he was also considering taking up a trade, such as carpentry.

The **provision of a variety of positive role models had particularly helped pupils to broaden their horizons.** For example, the headteacher from a school which partnered with an electrical company described how working with designers and ICT technicians provided pupils with new role models. He felt that usually the only role models that pupils are exposed to are their parents, (many of whom were perceived to be unemployed, or working in the black economy) and teachers, and not all pupils will want to be teachers. School staff felt that pupils had also opened up their minds by being exposed to people working in completely different fields; for example, pupils from one school met a *'Head of Imagination'* who worked at a media studio. A teacher explained that the Pathfinder had led pupils to think more ambitiously, such as running their own hairdressing salon rather than being a hairdresser. Whereas before the Pathfinder, pupils' horizons were much more limited and they already had a restricted view about what they wanted to do, a headteacher explained that thinking about careers from a young age had helped to *'open up the world for them'*. As many of these pupils were from disadvantaged backgrounds, then the changed perception that professional and skilled occupations are open to them could help to close the gap between them and their peers in the future.

School staff believed that, for the many vulnerable pupils in their care, it was particularly important to encourage the **acquisition of social and work-related skills**, and that one of the benefits of the Pathfinder had been to encourage this. In all the case study schools, staff interviewees described pupils as being more *'mature'*, and *'responsible'* as a result of the programme. They felt that the Pathfinder had helped pupils to co-operate well in teams, listen to each other and let others speak, and identify each other's skills, which they were not doing in the past. As this teacher explained:

> *They are learning through doing rather than learning through watching. I think that has become very obvious in them: they know how to do team work, not just talk about team work*

Aim 2: Increasing pupils' understanding of the link between education, qualifications and work opportunities

Even if pupils had aspirations, **they were often not fully aware of the pathways necessary to achieve them.** One of the aims of the Pathfinder was to increase pupils' understanding of the link between education, qualifications and opportunities, and, as a headteacher commented, the Pathfinder was *'not just about raising aspirations, but having knowledge on what is needed to achieve those aspirations and a sense of realism'*. In some cases this could mean that pupils had to lower their expectations, or

at least have a 'back-up plan' as already referred to. One teacher commented on the relevance of this for the number of boys in his school who wanted to be professional footballers even though they had no particular skill – an effect he believed of a pervasive media culture. However, there was also the opportunity to **counter the perception of pupils that many careers were closed to them because they would not be able to enter higher education.**

Before the Pathfinder began, most pupils had no experience of higher education, but, as reported in Chapter 2, by the time of the third survey, more Pathfinder pupils believed that they could go to university if they wanted than had thought so at the time of the baseline survey. As described in Section 3.1.1, visiting a university had been regarded by school interviewees as a particularly successful part of the Pathfinder programme, because such visits to universities had 'demystified' higher education for pupils, and as a result, they were talking more about an expectation of being able to go to university. As a Connexions adviser working in one of the schools explained:

> *The university visit had a real effect; almost two-thirds are now talking about higher education as a possibility, and most would not have done so before.*

Having student ambassadors showing pupils around universities worked particularly well as teachers felt that they made university more relevant and *'real'* for the pupils. The visits helped pupils to gain knowledge about future pathways and career routes, and to understand why they might need to go onto further and higher education in the future in order to fulfil their ambitions.

There was also the broader issue of helping pupils to understand the connection between their education, gaining qualifications and progressing to their future career, through the realisation that **working hard at school could improve their future prospects**. Although the survey results did not show any significant relationship between involvement in the Pathfinder and attitudes to learning, staff interviewed in all the case study schools thought that a more positive attitude had become more evident generally in the classes targeted, even if this was stronger in some individuals than others. One headteacher explained that; *'the idea that qualifications are currency is an important lesson for them'*, and pupils made comments during the follow-up focus groups such as:

> *Better education and qualifications means more choices for jobs; if you work hard in school you have a better chance of a better future; and I realise how much a good education means.*

Teachers reported that **pupils' understanding about how their academic performance would affect the extent of their career choice had increased, and that this had resulted in better motivation for some individuals.** This was reflected in the comments made by some of the pupil interviewees, who, for example, made the

connection between improving their skills in English and becoming a journalist, or the need to '*listen more in science lessons'* in order to consider a career in science.

Whereas the surveys indicated a decline in positive attitudes to school and learning (see Section 2.2.6 for '*the discussion on possible reasons why this more positive attitude was not a finding from the surveys*'), case study school staff felt that pupils had a generally more positive attitude towards school and their own education because they had engaged more with school through doing activities such as drama presentations and playing the Make It Real game, and that pupils had increased their confidence as a result of *'being a part of their own learning'*.

In the focus groups, pupils echoed this view, and most said that they were working harder at school than before the Pathfinder. Some pupils said that this was due to their SATs, and the extra preparation they were doing for these exams. However, it appears that their improved attitudes were also related to the Pathfinder, as a greater proportion of pupils made comments such as that they were:

> *Learning more interesting things; you can get learning things from fun;* and *going on trips – I'm doing better by doing things.*

Staff interviewees also pointed out that the way in which **literacy and numeracy skills could be integrated into Pathfinder-related activities,** such as writing thank-you letters to employers, or calculating the cost of a visit, had helped pupils see the relevance of these skills and the need to master them. As one teacher described it:

> *They know why numeracy and literacy skills are necessary, which has been a revelation.*

One headteacher described these hard-to-quantify advantages in this way*:*

> *They have been able to engage in their learning in a more meaningful way… some people might say actually it's a distraction but I don't believe it is – I believe it is feeding into the learning practice.*

Another related the development of useful practical skills back to the aims of the Pathfinder programme:

> *It's about giving the children the opportunities to develop, so they can't blame inadequacy or poverty any more. It's practical things, like getting them to use public transport to go into the city centre, to make them less territorial and encourage a broader vision.*

Attainment and attendance

In addition, there was a general perception by both school and LA staff that the Pathfinder had **raised pupils' attainment and attendance**; and two case study schools reported better SATs results as evidence of raised attainment. Although they commented that it was not possible to make a direct link between the Pathfinder and

improved attainment, nonetheless they felt there had been an effect because the Pathfinder helped pupils to become more mature, more engaged in their education and school, and because career-related learning reinforced the *'relevancy of education'*. Pupils had improved their attitudes towards school, and set their standards higher because it helped them to realise why it is important to do well. One LA officer reported a particular impact on the attainment and attendance of boys, based on feedback from pupils and parents. He felt that career-related learning activities could help boys in particular to understand the link between doing well in school and the world of work.

In two schools in particular, staff reported an improvement in pupils' attendance amongst those involved in the Pathfinder, which in turn had a positive effect on their progress. The headteacher in one of these schools explained how much of an achievement it was to have succeeded through Pathfinder activities in '*teaching them to get to school on time and changing their ethos'*, in an area where '*there are community support officers who have to collect children and take them to school because their parents are incapable'*.

They were more confident and more willing to take on roles, such as proactively organising fund-raising events. A headteacher from one case study school running the Pathfinder with Year 5 said that these pupils were far more mature than the Year 6 pupils who were not taking part in the Pathfinder. Furthermore, the Year 5s were informally mentoring and offering support to their peers who did not take part in the programme, and hence supporting its sustainability.

Attitudes and confidence

One of the results of skills acquisition and possibly of a more positive attitude to learning, was an increase **in the confidence of the pupils** – a change which was noted by staff interviewees in all the schools, and, as reported in Chapter 2, was also reflected in the pupil surveys. Although the increase in their confidence to work effectively between the baseline and final survey occurred in both comparison and Pathfinder schools, subgroup analysis revealed that the greatest improvement in confidence was in pupils eligible for FSM in Pathfinder schools (see Section 2.2.4). This can therefore be seen as another way in which the Pathfinder programme had relevance to the current policy of closing the gap for disadvantaged pupils.

LA and school staff felt that pupils were also more confident in terms of issues which are particularly pertinent to them in Year 6: SATs and their transition into secondary school. A headteacher from a school which focused on transition, both through a drama presentation, and also by having Year 9 pupils from the local secondary school mentoring Year 6 pupils, felt that Pathfinder activities such as these had helped to build confidence before their transition. This was important, as staff recognised that many pupils were nervous and uncertain about moving to secondary school. A Connexions adviser working in the school also felt that the transition work had been very successful in calming fears about moving on and helping pupils look forward to their future and see new opportunities rather than barriers. This view was echoed by a

headteacher from a different school who felt that their pupils would be more resilient when they went to secondary school, and think that *'I have the right to be someone and to have a view'*. Interestingly, the issue of transition was also raised by two of the parents interviewed (from different schools), who commented that their Year 6 children had shown far less concern about transferring to secondary school than their older siblings had done.

Aim 3: Reducing gender specific career/role stereotypes

One of the specific objectives of the Pathfinder programme was to **'reduce gender-specific career and role stereotypes**', and as described in Section 3.1.1, case study schools had attempted to achieve this by the use of visiting speakers and mentors who could serve as role models.

Survey analysis indicated that Pathfinder pupils showed significantly greater improvements than those in comparison schools in decreased stereotypical thinking, and that this was particularly the case with boys in Pathfinder schools. This breaking down of gender-based attitudes to careers was reflected in the follow-up group interviews in case study schools where pupils had remembered in particular the male nurses and female engineers and scientists who had spoken to them. It did appear too, that there had been some reflection on this, mainly with girls who had been encouraged to consider the possibility of specialist scientific careers, such as radiology and forensic science, as the result of coming into contact with such role models.

Aim 4: Engaging parents/carers in the process

The second round of case study visits attempted to unravel the extent to which schools had managed to gain parental *involvement* in the Pathfinder pilot, for example by attending a drama presentation, and to what extent they had attained parental *engagement* – a realisation of what the Pathfinder was attempting to achieve and how this impacted on their own behaviour and attitudes.

Parental response at any level was identified as the largest likely challenge in all the schools during the first visits and had indeed turned out to be so. In four schools, parental response was considered to have been better than expected, but as the school interviewees admitted, this was because their expectations had been low in the first place.

School interviewees' expectations of parental involvement were based on their experience of parental response to school events and parents' evenings, and the generally poor perception of parental engagement in their children's education. During the first visits, teachers and headteachers indicated that they would do their best to encourage the involvement of parents/carers in Pathfinder activities, for example by inviting them to accompany their children on university visits, providing information on the Pathfinder and sending out invitations to presentations and other

events. They hoped to achieve a level of parental interest, but made it clear that it was the pupils who were the priority, and that it would possibly be through the pupils' involvement that there might also be an effect on parents/carers.

In three schools a low level of parental interest was reported at the time of the second visits, and parental involvement was considered to have been the *'weakest element'* of the Pathfinder. In these schools, the interviewees considered that they needed to rethink their approach to parents/carers. One stated:

> *I'm sure that the children have talked to their parents about what they've been doing, but we have not captured that. I think a lesson for us is that we need to involve parents more.*

However, a parent interviewed from one of these schools was positive about the impact of the university visit in particular, and of the Pathfinder generally, in opening up ideas and encouraging realism. Whereas her son had originally only shown interest in the football route to the future, he was now looking more broadly at careers around sport, such as becoming a sports teacher or physiotherapist, and considering higher education. She felt that his natural common sense in questioning the limitations of a media-inspired view of the future had been developed and strengthened by the Pathfinder, and he was now approaching the opportunities presented by his skills in a more mature and optimistic way.

In the other four schools, the original expectations of the school staff had been exceeded.

In one, the headteacher was pleasantly surprised by the response to a presentation event, and reflected:

> *Parent engagement was the weakest element in our expectations. Parents have not been involved in any particular way, apart from coming to the presentation last week, when 15 families came in, but that was a good response, as a lot of them are third generation unemployed, and usually we wouldn't get any parents coming in.*

The teacher in another school described how:

> *There's been much better parental involvement than we expected. There are 17 parents attending the university tomorrow for the final session, which is the graduation. We had some parents in for an after-school activity* [Pathfinder-related] *and some of them commented on how they were pleased that the children were doing things that would broaden their horizons and they wished that they had been given those opportunities.*

This positive reaction was reflected in the views of a parent interviewee who had attended the university presentation. She commented on the impact of the Pathfinder on her son, and considered that it had opened his eyes to new possibilities and made

him more realistic. In common with other parent and school staff interviewees, she thought that the injection of realism was particularly important as a counter to media influence, which was widely perceived to encourage pupils to live in a fantasy world. She also considered that encouraging pupils to start thinking about their futures while at primary school was helpful if it made them aware of the huge variety of possible careers, and added that she would have liked to have had similar opportunities when she was at school.

In one school, the headteacher explained why he was satisfied with the parental response, even if it was at the level of just attending the celebration event, rather than a deeper level of engagement, because this was a hopeful first step:

> *I think we've had good parental involvement – some went on the university visit and lots came to the presentation. Parents like to come in to watch their children, whereas they're much less likely to come in for example, for a session on literacy.*

Most schools had used the Higher Education Institution (HEI) visit, and/or a drama presentation, or some type of end of project celebration, as the main means of engaging parents/carers, but in one school this had been particularly successful. The school had used an evening drama presentation to which parents/carers were invited, as a finale to the work with a theatre company that the pupils had participated in during the day. Around 70 parents/carers and family members had attended this – described by the teacher as *'a phenomenal response'*, and three parents who were interviewed here described how much they had both enjoyed the performance and been aware of the underlying message. One of them commented:

> *It was great fun and interesting. It had a serious point to put across, but was also great comedy value.*

The impact of the university visit was of particular interest, because although only a small number of parents/carers had been involved, all three parent interviewees felt that it had led them to reflect on their own situations. One parent, who had no experience of further or higher education was now considering a further education course as a result of the visit, and another, said that his daughter's involvement in the Pathfinder had made him realise that it was never too late to go back into education and training. He described how his daughter had *'lots of ideas now and wants to go to university. I never had those opportunities when I was at school'*.

Despite the challenging nature of attempts to engage parents/carers, school interviewees were not particularly disheartened by this. In all the schools the focus of the Pathfinder was on expanding horizons and building confidence and resilience in the pupils, because many lacked parental support and guidance. Achieving this was considered to be of prime importance, and if there was a beneficial effect on parents/carers, this was to be encouraged and welcomed, but was not their main concern. The common perception was that the attitudes of most parents/carers were very unlikely to be changed in the short-term, and the realistic hope was that if the

pupils' attitudes and expectations were altered in a positive way, eventually this might filter through to the parents/carers as well.

The LA view of parental involvement in the Pathfinder pilot reflected that of the schools, in that it was considered to have been the most challenging aspect of the programme. From those who commented on this there was also the belief that if engaging parents/carers was to be developed as a major aim of the programme, it would require a lot of effort, and as one interviewee described it, a personal approach:

> *It has been successful in some ways where we have managed to adopt a personal approach to parents, where the staff have had the time to speak to parents. At one parents evening S (*Connexions adviser*) went along and spoke to them all so they knew who she was and had a chat to them, we didn't do that with all schools. In the future I think because we have got some funding here, we're going to look at linking in a bit closer with the parents on a personal level.*

There was also agreement with the school interviewees that successful engagement of parents/carers required long-term development, and that one of the best approaches was to build on the interest that parents/carers tended to have in seeing their children presenting or performing in some way, and possibly using a venue other than a school, as this LA interviewee explained:

> *They showcased the drama work they did at that and I think that's, in my opinion, the way forward. Look at what is established and build on that. It wasn't in the school, it was in the community and that's another key part of this. It's about building trust and relationship and that happens over time, not just one project.*

3.2.2 Impact of the Pathfinder on schools

In addition to its impact on pupils, the Pathfinder had also impacted on schools and school staff. Teachers had enjoyed participating in the Pathfinder, as it enabled them to be more experiential with their teaching. They felt that they *'hadn't just been teaching for SATs'* which made them feel more *'motivated'* and *'fulfilled'*. It had also enabled teachers to reflect on their own teaching practice, and to reconsider their teaching methods. For example, one teacher said that the Pathfinder had helped her to realise the importance of keeping the curriculum relevant to pupils, and of the benefits of involving visitors from the world of work as part of the curriculum. Another had realised that it was important to give pupils more responsibility and ownership over their education, and she now asked pupils to do things for themselves rather than doing everything for them.

Teachers commented that other staff not directly involved in the Pathfinder had also seen its value and wanted to be part of it, as they had seen the pupils' enthusiasm for the activities that they had been doing, and positive changes in them. There was even some impact outside the participating areas, as one teacher said that she was able use

her ideas with pupils in another school she was working with as part of her National Professional Qualification for Headship (NPQH).

As already referred to in this chapter, the Pathfinder had led schools to revise their curriculum so that they could integrate career-related learning and this provided schools with more flexibility over the curriculum, and enhanced their autonomy.

Community partnerships
As a result of the nature of Pathfinder activities, all the schools had developed or built new links with local businesses, the local community and local universities and colleges. Many schools already had links with a variety of local employers, which they expanded and developed as part of the Pathfinder, as this headteacher described:

> *These links have helped raise aspirations over the years, but what was new this time was how well the university link has worked and how well Enterprise Week has worked. Our previous experience of this was not good, but this was a revelation.*

One case study school already had very strong links with local businesses and the local community, which is why they wanted to take part in the Pathfinder, as it '*clearly fitted*' with the work they were already doing. In another school, they had found it very useful developing links with a local Further Education (FE) college, which staff thought would be helpful in encouraging their pupils to start thinking about their post-16 futures in a positive way. Those interviewed from partner organisations all felt positive about the Pathfinder and were pleased to have been involved in it, as this manager of a company's community support programme described:

> *It's really worth it… from the area I would guess that pupil aspirations are not high, but what the headteacher is doing, and what we do to try and help should be making a difference.*

3.3 Challenges

Overall, the interviewees regarded the Pathfinder as having met or exceeded its aims. The only major challenges that were indicated by interviewees related to time and timing and to parental involvement.

3.3.1 Time and timing

The twin issues of time and timing were raised by most schools during the first visits. The timing issue referred to when was considered the optimum time for career-related learning, in terms of which Year group should be involved and which part of the school year should have the main focus of activities. The time issue referred to the amount of curriculum time that career-related learning would take.

During the first visits, school staff interviewees had expressed concern that time spent on career-related learning activities might put pressure on the rest of the curriculum, and that if the Pathfinder was used in Year 6 this was a particular issue. Headteachers and teachers in several schools made similar comments to this interviewee: *'Fitting it all in could be difficult, as the curriculum is already so overcrowded'*. In two case study schools, the decision had been taken to introduce the Pathfinder in Year 5 because of this concern, and the teacher in one of these schools expressed surprise that any school would even consider using the programme in Year 6. However, for the majority of schools that had chosen to do so, there was a view that despite the added pressure of integrating a new programme into the final year of primary education, its direct relevance to transition to the secondary sector, and to looking ahead to new opportunities, made it worthwhile.

By the time of the second visits it was clear that some of the concerns about both the time spent on Pathfinder activities, and the timing of them, in terms of what one teacher described as a *'packed curriculum'*, had been reduced by the perceived benefits of participation. In particular the cross-curricular advantages of Pathfinder activities had helped to allay fears about a detrimental effect on other areas, with, for example, perceived benefits for literacy and numeracy skills, as well as the positive impact on pupils' confidence, self-esteem and the recognition from pupils that school work had a direct relevance to their own futures. In fact, only in two schools were the issues of time and timing still raised as challenges by the second round of visits. In one school, the Pathfinder in Year 6 was built on career-related learning that already took place in Year 5, and staff considered that attempting to cover it all in Year 6 would be very difficult, as Year 6 staff had already been stretched to accommodate the activities that had been undertaken. The headteacher's main piece of advice to other schools that might consider introducing career-related learning was:

> *Don't leave it all to Year 6 – lay the foundation in Year 5 by getting the children out to a variety of workplaces and bring people in from as wide a range of jobs as possible.*

In the other school, the headteacher summed up the need to balance time pressures with the advantages of the programme:

> *Be aware that it takes up curriculum time and that can be quite difficult in Year 6. The loss of curriculum time has been the only disadvantage, but the positive impact on the pupils needs to be put in the balance.*

Another recommendation connected to timing that was also raised in some schools was that in order to do justice to the programme, it was not a good idea to restrict it to a limited timeframe within the school year, although this had been necessary because of the way that the Pathfinder pilot programme was organised. Starting the Pathfinder activities after Christmas rather than in the autumn term was considered to have increased the pressure on time and encouraged a reappraisal of the best use of time, which was useful for planning future implementation. This was reflected in this

teacher's comment: '*January to Easter in Year 6 was not the best time for it. Now I know what I'm doing, I'll start it earlier, in the autumn term'*.

3.4 Sustainability and the future

3.4.1 Attitudes to sustainability

There was an intention in **all the case study schools to sustain the Pathfinder pilot in some form in future, and extend its use where possible.** In all cases, integrating the programme into the curriculum was seen as the way forward, as this was the most cost-effective method and delivered benefits in terms of cross-curricular learning. In any case, school interviewees considered that a programme of this nature could not be undertaken in isolation. One teacher explained that her main advice to another school thinking about taking up the programme would be:

> *It can't be done as a stand-alone programme. Look at what your school is already doing and make it useful generally and sustainable. Tie it in with the pupils' learning so that they realise the relevance of that learning.*

There was a high level of commitment for sustaining those elements of the programme which extended the understanding of pupils about the wide variety of careers which they could consider in the future and the routes to achieving these. School staff hoped to use their links with EBPs, individual local businesses, parents/carers and school governors to bring visitors into the schools for curriculum input, and to organise enterprise weeks and career days as special events. The links to transition, and cooperation with secondary schools and FE colleges would also be continued and developed.

As already referred to in Section 3.3.1, the time allocation for, and timing of Pathfinder activities had sometimes presented challenges for schools, and so in considering future plans, there was a general consensus that career-related learning needed to be spread not only across the academic year, but also started in earlier years. Those schools that had used the programme in Year 6 intended to start in future in Year 5, and there was an impetus towards extending the programme into Years 3 and 4 too, so that it would become a part of the entire Key Stage 2 curriculum. In two schools they were also considering adapting some of the programme for use with Key Stage 1 pupils. The extension down to lower age groups that was planned by all case study schools was both a measure of the enthusiasm for career-related learning, in its broadest sense, that had been encouraged by implementing the Pathfinder; and the result of a reflective process in schools that recognised the benefit of spreading the programme across a wider age range, in order to achieve the maximum benefit for pupils. This was considered important in order to build up the benefits gained from the programme over the primary years, before the pupils transfer to secondary school. This extension of the programme was also likely to facilitate strategies for engaging parents/carers.

In the two schools where the Pathfinder pilot had been implemented in Year 5, there were specific plans for the pupils who had taken part in the Pathfinder, and who would be moving into Year 6, to lead the implementation for the Year 5s who would start in September 2010.

3.4.2 Future funding and possible solutions

Not surprisingly, the main concern about implementing the programme in future was accessibility to funding. In four schools, staff thought it was unlikely that they would be able to include 'high profile' elements such as the work with a drama company, a city tour, or the HEI visit. However, there was an expectation in the other three schools that they would find resources from their own budgets to be able to continue with these. In one of these schools, the headteacher commented:

> *We will set aside a pot of money for trips out and activities because these children don't do much else, and in that way all the children can access the same opportunities.*

In some schools, staff also referred to the possibility of pooling resources and costs across federations or networks of schools, so that individual schools would still be able to take advantage of elements, such as the HEI visit, which was regarded as particularly helpful.

The six LA interviewees were also optimistic about future implementation, despite the ending of the Pathfinder grant. Three said that they would not be able to provide funding, but would encourage existing Pathfinder schools to continue, and would encourage others to begin using the programme. One of these interviewees pointed out that the extensive resources created during the pilot could be utilised in the future and that there was the possibility of a website for teachers to use to exchange ideas and resources. Two LA interviewees said that they hoped school federations could work collectively to share costs, and there was also a suggestion that it might be possible for universities to obtain funding from other sources to cover the costs of the university visit. Case study schools in all these three areas were already fully committed to continuation and expansion of the programme.

The other three LAs all had plans for support in hand; two intended to position Pathfinder provision within other strategies and to provide some funding to schools. One of these also hoped that clusters of primary and secondary schools working together might be able to cover the costs of working with the drama company. The third explained that *'a small pot of money has been secured for funding the Connexions adviser to work with Pathfinder schools until April 2011'*. In addition, a pack of key resources, including a DVD with curriculum guidance, and a training programme for teachers would allow six new schools to begin using the Pathfinder, with a longer-term plan to put the programme in place across the city.

The commitment of these LAs, and that of individual schools, not only to sustain the programme, but to expand it to other schools and age groups, was indicative of the

enthusiasm for the programme and the belief that it had the potential to change the futures of pupils for the better, and perhaps to assist the process of closing the gap for the most disadvantaged pupils.

3.5 Summary of qualitative case study findings

Successful implementation of the Pathfinder

- School staff considered that the Pathfinder had suited their school ethos and assisted in broadening the horizons of pupils, increasing their confidence and resilience and encouraging greater realism in their future expectations;
- Elements of the Pathfinder had been built into the curriculum and underpinned delivery; events, such as a university visit, or drama presentation, provided highlights and focused learning, and were reported as particularly successful;
- Bringing visitors into the school to talk about particular career areas and business skills had been a particularly effective element of the Pathfinder. It had opened up new horizons for pupils, countered gender stereotyping and provided cross-curricular learning, for example with financial literacy, or healthy eating;
- Visits out to workplaces, neighbourhoods and city centres had been used imaginatively by school staff to widen pupils' knowledge of their own areas and of the types of employment and facilities that existed within easy reach of their homes; and,
- The Pathfinder had been successfully linked in with preparation for transition to secondary school and was reported to have reduced pupils' concerns about transition.

Perceived impact of the Pathfinder on pupils

- Increased awareness, knowledge and understanding of types of employment and pathways to get there;
- Increased understanding of the link between education, qualifications and careers and encouraged a more positive attitude towards school and education;
- Improved skills, including team-work and independence;
- Increased understanding of different sources of help/advice about making choices;
- Increased self-confidence, especially around transition to secondary school; and,
- Improved the attendance and attainment of some pupils, with a perception in some schools that this had helped to improve SATs results.

Challenges and sustainability

- The main challenge had been engaging parents/carers in the Pathfinder, with some schools having achieved better results than others; and,

- All the case study schools intended to sustain at least some elements of the Pathfinder programme and extend them to other age groups.

4. Conclusions and implications

This chapter presents the key messages from the Pathfinder evaluation and discusses the implications of these.

4.1 Conclusions

The Pathfinder evaluation provides an insight into the initial outcomes of the Key Stage 2 Career-Related Learning Pathfinder pilot; it does not however measure the long-term outcome of the Pathfinder: pupils' actual choices of educational participation and careers. This evaluation strongly suggests that the Pathfinder pilot has been to an encouraging extent effective in terms of meeting its overarching aim of raising pupils' aspirations and broadening their horizons. There were consistent indications that the Pathfinder had contributed to:

- Increasing pupils' awareness of choices and options for the future;
- Increasing pupils' understanding of the link between education, qualifications and work opportunities;
- Facilitating opportunities for curriculum and teacher development;
- Reducing pupils' gender specific career/role stereotypes; and,
- Providing opportunities to engage parents/carers.

4.2 Key findings from the Pathfinder evaluation

In terms of an overall evaluation of the Pathfinder pilot, its effectiveness can be examined by pulling together findings from the surveys and the case studies, and comparing these against the four original aims of the pilot. The evidence suggests that the Pathfinder has effectively fulfilled three of the original aims:

- Increasing pupils' awareness of career/work opportunities;
- Increasing pupils' understanding of the link between education, qualifications and work opportunities; and,
- Reducing gender specific career/role stereotypes.

As had been anticipated at the start of the Pathfinder, engaging parents/carers was viewed by schools and LA interviewees as the weakest element of the programme. This was also reflected in the survey findings, as although Pathfinder schools reported involving parents/carers in career-related learning to a greater extent than comparison schools, the difference was small and not every Pathfinder school was doing this. However, all case study schools used the opportunity provided by the Pathfinder to attempt to engage parents/carers, some more successfully than others. Furthermore,

some positive exemplars of good practice arose from the case studies which could be built on by other schools.

The following section includes some key findings relating to the original aims of the Pathfinder pilot.

Aim 1: Increasing pupils' awareness of career/work opportunities

- Pupils involved in the Pathfinder pilot showed increased awareness, knowledge and understanding of types of employment and pathways to get there.
- The Pathfinder intervention was associated with an increase in career-related learning activity in these schools in comparison to what other similar schools were doing.
- School staff considered that the Pathfinder had suited their school ethos and assisted in broadening the horizons of pupils, increasing their confidence and resilience and encouraging greater realism in their future expectations.
- There was some evidence that the Pathfinder had helped to raise pupils' aspirations for the future and extend their horizons about what they could do in the future, for instance:
  - Between baseline and Sweep 2, pupils eligible for FSM and pupils in Year 5 in Pathfinder schools showed a significant increase in confidence in their ability to do a professional level job in the future (although this difference was not sustained at Sweep 3);
  - Between baseline and Sweep 2, boys in Pathfinder schools showed a greater increase in confidence than girls in Pathfinder schools that they could do a skilled job in the future (this difference was not sustained at Sweep 3); and,
  - Between baseline and Sweep 3, Pathfinder Year 5 pupils showed a greater increase in confidence in their ability to do a professional or a skilled job.

Aim 2: Increasing pupils' understanding of the link between education, qualifications and work opportunities

- Pupils involved in the Pathfinder pilot showed increased understanding of the link between education, qualifications and careers and a more positive attitude towards school and education; and,
- Elements of the Pathfinder had been built into the curriculum and underpinned delivery; events, such as a university visit, or drama presentation, provided highlights and focused learning, and were reported as particularly successful.

Aim 3: Reducing gender specific career/role stereotypes

- Pathfinder pupils showed significantly greater improvements in terms of stereotypical thinking than those in comparison schools at both Sweeps 2 and 3;

- Pupil survey results showed that over the course of the evaluation, Pathfinder pupils showed a greater decrease in stereotypical thinking and greater improvements in their perceptions of the effectiveness of career-related learning in their school than comparison pupils;
- The findings indicate that involvement in the Pathfinder pilot could be associated with greater decreases in pupils' stereotypical perceptions beyond that seen with usual career-related learning delivery in schools at Key Stage 2; and,
- The Pathfinder may especially have been successful in decreasing stereotypical thinking among pupils about the jobs that they could do in the future, and closing the gap between disadvantaged pupils and their peers in terms of their confidence in their ability to work effectively and their choices for the future.

Aim 4: Engaging parents/carers in this process

- As had been anticipated at the start of the pilot, engaging parents/carers was viewed by schools and LA interviewees as the weakest element of the Pathfinder. This was also reflected in the survey findings, as although Pathfinder schools reported involving parents/carers in career-related learning to a greater extent than comparison schools, the difference was small and not every Pathfinder school was doing this;
- However, all case study schools used the opportunity provided by the Pathfinder to attempt to engage parents/carers, some more successfully than others. Furthermore, some positive exemplars of good practice arose from the case studies which could be built on by other schools; and,
- Overall, few schools had successfully engaged parents/carers in the Pathfinder pilot and this is a challenge that could be addressed if the programme continues.

4.3 Other overarching outcomes

4.3.1 Improving pupil outcomes and 'closing the gap'

Pupil survey results showed that over the course of the evaluation, Pathfinder pupils showed a greater decrease in stereotypical thinking and greater improvements in their perceptions of the effectiveness of career-related learning in their school than did comparison school pupils. The case studies also found that pupils had: improved skills, including team work and independence; were more open to classroom discussion and different sources of advice about making choices; were more mature and confident; and were more positive towards school and education.

There was evidence from the survey that involvement in the Pathfinder helped to close the gap between pupils eligible for FSM and their peers, especially in terms of confidence in their ability to work effectively, and the types of jobs they perceived they could do in the future. The pathfinder also appears to have been particularly effective at meeting the needs of pupils with SEN. In these ways, elements of the

pathfinder appear to have helped pupils from perhaps the poorest and most vulnerable backgrounds to gain the awareness and confidence needed to fulfil their potential.

4.3.2 Extending horizons and raising aspirations

By the end of the Pathfinder, more disadvantaged pupils felt that skilled and professional jobs were an option for them.

Interview evidence showed that despite the pilot's official title, the Pathfinder was about more than raising aspirations, which was a term considered by some interviewees to carry a value-judgement. It was about extending pupils' horizons by increasing their awareness of the different choices and pathways open to them in the future, and building their confidence and self-esteem. In particular, school staff had used the Pathfinder pilot to encourage realistic aspirations and to show their pupils the routes towards achieving these. Interviewees in all the case study schools considered that the programme had achieved these aims, and in particular had extended the horizons and increased the confidence and self-reliance of the pupils involved.

4.3.3 Curriculum integration

According to school staff, the main elements of the Pathfinder provided a useful structure to schools, which they could supplement with their own chosen career-related learning activities. School staff welcomed the opportunity to have the flexibility to develop innovative and diverse provision of career-related learning, tailored to meet the specific requirements of their pupils. Schools had seized the opportunity to develop a curriculum that best suited their pupils, and linked into existing priorities, such as healthy eating, raising attainment in literacy, or developing personal financial skills. School staff also reported positively on the value of the links between the Pathfinder and work on transition from primary to secondary school, and the greater confidence with which pupils now approached transition.

4.3.4 Partnerships

Interview evidence showed how the Pathfinder pilot had helped to bring together schools, parents/carers, the local community and local businesses and so tapped into the social capital of local communities. Contact with local places of work and further and higher education had not only increased pupils' awareness of different career options and pathways, but also provided them with positive role models, some of which were particularly useful in challenging gender-based stereotypes. Additionally, through these contacts, school staff reported that pupils gained greater confidence and maturity, and were more willing to take on responsibilities such as peer mentoring and initiating fund-raising opportunities.

4.4 Implications

4.4.1 Wider use of the Pathfinder and adaptability

Based on initial findings, it is recommended that opportunities to support the extension of Pathfinder pilot should be given careful consideration by DfE. Evidence suggests that the Pathfinder programme provides schools with a programme of work that can be adapted and implemented to meet a school's individual context and need, and so could be effectively replicated and implemented in a wider range of school settings.

Targeting

The impacts of the pilot on pupils support the idea that providing career-related learning at Key Stage 2 is an optimum time, as it is when pupils are still open and responsive to new ideas, and before they begin to narrow down their options. However, since the evidence indicates the Pathfinder's particular potential contribution towards 'closing the gap', it is suggested that encouraging a wider employment of the pilot where the findings suggest it would be most effective; namely, on schools situated within areas of economic and social disadvantage.

4.4.2 Value for money and sustainability

Overall, for comparatively low costs, the case study school interviewees considered that the Pathfinder had successfully delivered on its stated aims and objectives, and all the case study schools intended to sustain at least some elements of the programme and extend them to other year groups. The DfE could explore ways to help support the targeted wider use of the Pathfinder programme. For instance, it may be the case that such support could be channelled through providing information perhaps linked with the new school-level focus on choice and freedom or through initiatives like the Pupil Premium. This could be done via web links and via existing methods such as school bulletins.

4.4.3 Parental engagement and community partnership

For schools situated within areas of deprivation, involving and engaging parents/carers are particular challenges and while the study confirms this, the Pathfinder had provided some schools with an opportunity to address this issue, through providing a vehicle for greater parental engagement. In addition, as integral elements of Pathfinder activity, schools develop wider links within their community and this fits well with encouraging and facilitating schools' efforts to build useful local partnerships.

4.4.4 Building on the Pathfinder pilot and sharing good practice

The evaluation has provided a range of exemplars of good practice developed and implemented by Pathfinder schools. The DfE could help support the transfer of good practice, by contributing to the dissemination of good practice and enabling schools to build on the 'what works' knowledge and practice already tried and tested during the Pathfinder pilot.

4.4.5 Further research

A quantitative exploration of the attainment of pupils in Pathfinder schools at Key Stage 2 is recommended, in order to provide a quantitative perspective on interview evidence suggesting positive Pathfinder impact on attainment. This would compare their data to otherwise similar pupils in the comparison group. It should be noted that the current evaluation ended before such comparisons were possible. In the longer-term, additional follow-up analysis on the attainment of Pathfinder pupils would provide additional useful evidence of any longer-term impact of the Pathfinder pilot.

A longer-term evaluation (or a longitudinal evaluation) of any wider use of the Pathfinder pilot could:

- Explore the potential contribution of the Pathfinder to addressing challenges associated with transition;
- Provide opportunities for process research to further explore good practice and what works in Pathfinder provision;
- Offer a multi-perspective retrospective views on the impact and outcomes of the Pathfinder; and,
- Provide evidence and information about how the Pathfinder is sustained and whether and for how long benefits may last.

4.5 Final thoughts

Set against the developing priorities for education in England, the weight and constancy of the evidence collected is encouraging. The fact that all case study schools were intending to continue the Pathfinder despite the end of additional funding, and that some schools intended to extend it lower down in Key Stage 2, is testament to the perceived benefits of the Pathfinder. Although it was introduced before the change in government, the evidence suggests that the programme has the potential to fit well with the developing priorities for education in England, in particular in its potential to help ‘close the gap’ for disadvantaged pupils, to encourage schools to develop a curriculum and practices that best suit their circumstances, and to give impetus to building strong local partnerships.

Appendix 1 Pupil survey

We would like to find out:

- What you think about yourself and your future
- What you think about the jobs you might like to do one day.

Inside this booklet are questions about this.

Please answer all the questions honestly.

Your answers are very important to us. There are no right or wrong answers. Your teacher will not mark your answers.

1. Please write your name in the box

2. Please ✓ if you are in year 5 or year 6

Year 5 ☐

Year 6 ☐

3. Please ✓ if you are a boy or a girl

I am a boy ☐

I am a girl ☐

4. Please write your date of birth in the boxes below

Day Month Year

Have a go at this practice question:

Put a ✔ in the box closest to what you think

	 **Strongly agree** 1	 **Agree** 2	 **Not sure** 3	 **Disagree** 4	 **Strongly disagree** 5
I like dogs	☐	☐	☐	☐	☐

If you **really like** dogs put a ✔ in the **strongly agree** box

If you **like** dogs put a ✔ in the **agree** box

If you are **not sure** if you like dogs put a ✔ in the **not sure** box

If you do **not like** dogs put a ✔ in the **disagree** box

If you **really do not** like dogs put a ✔ in the **strongly disagree** box

About you

These questions are about you.

1.

Put a ✔ in the box closest to what you think

	Strongly agree 1	**Agree** 2	**Not sure** 3	**Disagree** 4	**Strongly disagree** 5
I am good at working on my own	☐	☐	☐	☐	☐
I am good at solving problems	☐	☐	☐	☐	☐
I am good at working with other people	☐	☐	☐	☐	☐
I find it easy to look for information when I need it	☐	☐	☐	☐	☐

2. Put a ✔ in the box closest to what you think

	Strongly agree 1	Agree 2	Not sure 3	Disagree 4	Strongly disagree 5
I ask for help with my school work if I need it	☐	☐	☐	☐	☐
I can do things that are hard if I keep trying	☐	☐	☐	☐	☐
I can set targets for myself	☐	☐	☐	☐	☐
I know what I am good at	☐	☐	☐	☐	☐
I know what I need to do to improve my school work	☐	☐	☐	☐	☐

3. Put a ✔ in the box closest to what you think

	Strongly agree 1	Agree 2	Not sure 3	Disagree 4	Strongly disagree 5
I can do things as well as other people my age	☐	☐	☐	☐	☐
I find it hard to do things well	☐	☐	☐	☐	☐
I enjoy doing new things	☐	☐	☐	☐	☐
There are lots of good things about me	☐	☐	☐	☐	☐

4. Put a ✓ in the box closest to what you think

	Strongly agree 1	Agree 2	Not sure 3	Disagree 4	Strongly disagree 5
I usually do well at school	☐	☐	☐	☐	☐
My school work is interesting	☐	☐	☐	☐	☐
I complete my homework on time	☐	☐	☐	☐	☐
I usually look forward to coming to school	☐	☐	☐	☐	☐
School work is a waste of time	☐	☐	☐	☐	☐
I want to leave school as soon as I am old enough	☐	☐	☐	☐	☐

Different jobs

These questions are about different types of jobs.

5. Put a ✔ in the box closest to what you think

	Strongly agree 1	Agree 2	Not sure 3	Disagree 4	Strongly disagree 5
Women make the best cleaners	☐	☐	☐	☐	☐
Men design the best clothes	☐	☐	☐	☐	☐
It's easier for boys to get the job they want	☐	☐	☐	☐	☐
Being black makes it harder to find a job you like	☐	☐	☐	☐	☐
Being a nurse is not a job for a man	☐	☐	☐	☐	☐
Being a plumber is not a job for a woman	☐	☐	☐	☐	☐
Naughty people can't join the Police	☐	☐	☐	☐	☐

Learning about jobs at school

These questions are about learning about jobs at school.

6. Put a ✔ in the box closest to what you think

My school is good at helping me to …	Strongly agree 1	Agree 2	Not sure 3	Disagree 4	Strongly disagree 5
find out about different jobs	☐	☐	☐	☐	☐
learn about the places where people work	☐	☐	☐	☐	☐
find out about jobs in other countries	☐	☐	☐	☐	☐
learn about jobs in different parts of this country	☐	☐	☐	☐	☐
learn about university	☐	☐	☐	☐	☐
learn about starting secondary school	☐	☐	☐	☐	☐

7. Put a ✔ in the box closest to what you think

If I want to find out more about a job I am able …	Strongly agree 1	Agree 2	Not sure 3	Disagree 4	Strongly disagree 5
to talk to teachers at school	☐	☐	☐	☐	☐
to talk to people at home	☐	☐	☐	☐	☐
to talk to my friends	☐	☐	☐	☐	☐
to talk to someone who does that job	☐	☐	☐	☐	☐
to find the information on a computer	☐	☐	☐	☐	☐

Choices in the future

This question asks you about your future.

8. Put a ✔ in the box closest to what you think

When I leave school …	Strongly agree 1	Agree 2	Not sure 3	Disagree 4	Strongly disagree 5
I will have lots of choices about the job I want to do	☐	☐	☐	☐	☐
It will be difficult for me to get a job	☐	☐	☐	☐	☐
I will have more choices if I have done well with my schoolwork	☐	☐	☐	☐	☐
I can do any job I want	☐	☐	☐	☐	☐
I can go to university if I want	☐	☐	☐	☐	☐

9. Look at the pictures below.

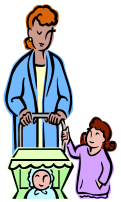
Each set of pictures shows some different types of work. When you are grown up, you might like to do all, some or none of the jobs shown.

We want to find out if you <u>want</u> to do a job <u>like</u> the ones shown.

We also want to find out if you think you <u>could do</u> a job <u>like</u> the ones shown.

(9a) Types of jobs where you use your hands or look after people

Builder



Childminder

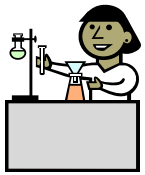
Car mechanic

Hairdresser

✔ **one** box next to **each** statement	**Strongly agree 1**	**Agree 2**	**Not sure 3**	**Disagree 4**	**Strongly disagree 5**
When I grow up, I <u>want</u> to do a job like one of these	☐	☐	☐	☐	☐
When I grow up, I <u>could do</u> a job like one of these	☐	☐	☐	☐	☐

(9b) Types of jobs where you have a profession or you are in charge of people

Doctor



Scientist

Manager in charge of people

Teacher

✔ **one** box next to **each** statement	**Strongly agree 1**	**Agree 2**	**Not sure 3**	**Disagree 4**	**Strongly disagree 5**
When I grow up, I <u>want</u> to do a job like one of these	☐	☐	☐	☐	☐
When I grow up, I <u>could do</u> a job like one of these	☐	☐	☐	☐	☐

(9c) Types of jobs where you can use your skills or can keep people safe and well

Professional sports person

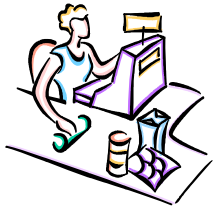
Firefighter

Artist

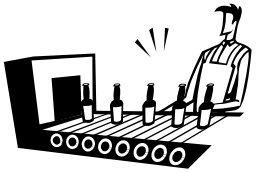
Secretary

✔ **one** box next to **each** statement	**Strongly agree 1**	**Agree 2**	**Not sure 3**	**Disagree 4**	**Strongly disagree 5**
When I grow up, I <u>want</u> to do a job like one of these	☐	☐	☐	☐	☐
When I grow up, I <u>could do</u> a job like one of these	☐	☐	☐	☐	☐

(9d) Types of jobs where you work in shops, factories or drive



Shop assistant



Factory worker

Lorry driver

Fork-lift truck driver

✔ **one** box next to **each** statement	**Strongly agree 1**	**Agree 2**	**Not sure 3**	**Disagree 4**	**Strongly disagree 5**
When I grow up, I <u>want</u> to do a job like one of these	☐	☐	☐	☐	☐
When I grow up, I <u>could do</u> a job like one of these	☐	☐	☐	☐	☐

(9e) Other types of jobs

Theme park attendant

Waiter/waitress

Cleaner

Postman/lady

✔ **one** box next to **each** statement	**Strongly agree 1**	**Agree 2**	**Not sure 3**	**Disagree 4**	**Strongly disagree 5**
When I grow up, I <u>want</u> to do a job like one of these	☐	☐	☐	☐	☐
When I grow up, I <u>could do</u> a job like one of these	☐	☐	☐	☐	☐

10. **Have you thought about what you would really like to do when you grow up?**

Put a ✔ in **one** box

Yes ☐

No ☐

If you answered 'Yes', what would you like to do?

Please turn over...

About your family

These questions are about your family.

11. Put a ✔ in the box closest to what you think

My parent/carer …	Strongly agree 1	Agree 2	Not sure 3	Disagree 4	Strongly disagree 5
wants me to do well at school	☐	☐	☐	☐	☐
talks to me about school	☐	☐	☐	☐	☐
thinks school is a waste of time	☐	☐	☐	☐	☐
wants me to go to university	☐	☐	☐	☐	☐
is interested in my future	☐	☐	☐	☐	☐

Thank you for your help

The Mere, Upton Park, Slough, Berkshire, SL1 2DQ
Tel: +44 1753 574123

Appendix 2 School questionnaire

Schools question sheet

Thank you for agreeing to help us with our evaluation of the Career-Related Learning (CRL) pathfinder initiative. We need to confirm the kinds and types of activities you are putting or planning to put in place so that we can set the findings from your pupil survey in context. Therefore, please complete this very brief questionnaire and return it in the envelope provided.

1. Please indicate whether you have conducted, or whether you intend to conduct, a formal needs analysis of the personal development and well-being needs of pupils at your school in relation to any of the following:

		We already do it 1	We plan to start doing it in this academic year 2	We have no plans to do it in this academic year 3	Not sure 4	Not needed 5
1.	Pupils' confidence/self-esteem	☐	☐	☐	☐	☐
2.	Pupils' confidence in relation to what they believe they can achieve and do (their perceived self-efficacy)	☐	☐	☐	☐	☐
3.	The types of work pupils aspire to	☐	☐	☐	☐	☐
4.	What pupils think their future might hold	☐	☐	☐	☐	☐
5.	Parents' attitudes in regard to their children's futures	☐	☐	☐	☐	☐
6.	Parents' attitudes in regard to their children's career aspirations	☐	☐	☐	☐	☐

2. In terms of exploring opportunities and horizons ....

		We already do it 1	We plan to start doing it in this academic year 2	We have no plans to do it in this academic year 3	Not sure 4	Not needed 5
1.	Staff discussing career opportunities with pupils	☐	☐	☐	☐	☐
2.	Staff discussing pupils' career opportunities with parents	☐	☐	☐	☐	☐
3.	Taking pupils on visits to give them new experiences/ broaden their horizons	☐	☐	☐	☐	☐
4.	Staff encouraging pupils to raise their aspirations	☐	☐	☐	☐	☐
5.	Staff encouraging parents to explore their aspirations for their children	☐	☐	☐	☐	☐
6.	Staff encouraging parents to help their children to have realistically high aspirations	☐	☐	☐	☐	☐
7.	Using visitors to encourage pupils to explore their aspirations	☐	☐	☐	☐	☐
8.	Using visitors to encourage/better enable staff to help pupils have higher aspirations	☐	☐	☐	☐	☐
9.	Using visitors to encourage/better enable staff to help parents have realistically high aspirations for their children	☐	☐	☐	☐	☐
10.	Using visiting drama/theatre groups to help broaden children's horizons	☐	☐	☐	☐	☐

Appendix 3 Technical appendix: Statistical analyses and results

A3.1 Analysis techniques: an introduction

In this technical appendix we explain and describe the statistical analyses carried out using data derived from the pupil survey (Sweeps 1, 2 and 3) and from the school questionnaire (Sweeps 1 and 3).

The analysis techniques employed were:

- composite creation: the research team selected response items to group together under 'theme' labels
- factor analysis: response items were analysed according to the themes to identify if the items under the themes reliably grouped together. From any such grouping, researcher themes are either confirmed or adapted and then further analysed for their suitability to be used as outcomes and/or predictors in modelling
- reliability analysis: analysis examining the strength of the statistical connections of the items grouped in composites according to the themes from the factor analysis, confirming that they relate to the same theme. Reliable composites were then used as outcomes and/or predictors in the multi-level modelling and analysis of variance (ANOVAs) analyses. Reliability analyses were run on pupil and school questionnaire factors at each Sweep to confirm whether the items were still holding together to form a reliable scale. Apart from one scale from the school questionnaire ('Outside partners') at Sweep 3, all scales were found to be reliable
- multi-level modelling (MLM): explained in more depth below, but broadly MLM takes account of the hierarchical nature of the data (for example, that pupils are grouped within schools and that schools are grouped within LAs), and then goes on to allow analysis to take into account a range of background variables when exploring outcomes; hence, such analysis asks, all other things being equal what is the correlation between a given outcome and a set of background variables. This analysis was used to explore how pupil outcomes changed over time, whether there were differences between Pathfinder and comparison schools over time and which types of pupils changed in particular ways
- ANOVAs: these were used to look at differences between Pathfinder and comparison schools in their reponses to the school questionnaire at Sweep 1 and Sweep 3. For example, these analyses allowed us to see whether Pathfinder schools were delivering more CRL at Sweep 1 than comparison schools. Background variables, though, were not entered into this analysis, so the results from this reflect differences when other variables that might influence the outcomes are not taken into account.

A3.2 Composite creation and the pupil survey

Individual question items in the pupil survey that were similar were grouped together under themes by the researchers to form composite measures of pupil outcomes – for example, items relating to stereotypical thinking were grouped under a theme called 'stereotypical thinking'. These themed composites were then further tested in factor and reliability analyses to check that the items correlated well with each other and formed valid and reliable measures. Through looking at the correlation structure of the data, we were able to reduce the number of variables required to explain the data from the original large number of questions to a smaller set of underlying 'factors' or 'measures'.

The process of creating and selecting composite outcomes and predictors for the pupil survey involved three Key Stages:

1. Initial composite creation and factor analysis: in close dialogue with research partners, response items were selected and grouped into composites related to key research questions regarding the attitudes of pupils towards their future career and aspirations. These composites were confirmed using factor analysis.
2. Reliability analysis: For each of the resultant composites reliability analysis was carried out. This analysis enabled us to check the extent to which the response items making up each of the researcher-created and factor analysis-confirmed composites reliably 'loaded' together. Hence, also such reliability analysis identified response items that did not increase the overall reliability of the summary variable and these items were removed from the measure.
3. Analysis workshop: NFER, DfE and the CRL developers met to consider the outcome of the reliability tests, select composites to use as outcomes in the MLM analysis. Only composites that were found to be acceptably reliable were included in the MLM and ANOVAs.

Table A3.1 below shows each composite label and description, the response items used to create the composite and the reliability outcome measure for each composite (note that the closer to one the more reliable the composite).

Table A3.1 Pupils survey composites

Composites and how used	Pupil survey question numbers and response items	Reliability test outcome Sweep 1	Reliability test outcome Sweep 2	Reliability test outcome Sweep 3
Stereotypical thinking. This measures the extent to which pupils' assessments of the suitability and success in potential careers are influenced by gender and ethnicity stereotype. Used as outcome and predictor in the MLM.	q5a *Women make the best cleaners* q5b *Men design the best clothes* q5c *It's easier for boys to get the job they want* q5d *Being black makes it harder to find a job you like* q5e *Being a nurse is not a job for a man* q5f *Being a plumber is not a job for a woman*	0.656	0.725	0.77
CRL effectiveness. This measures pupils' views on the effectiveness of their school's CRL work in terms of informing and preparing them for transition to secondary education and future careers. Used as outcome in the MLM.	*My school is good at helping me to…* q6a *…find out about different jobs* q6b *…learn about the places where people work* q6c *…find out about jobs in other countries* q6d *…learn about jobs in different parts of this country* q6e *…learn about university* q6f *…learn about starting secondary school*	0.782	0.810	0.828
Parental aspirations. Measures pupils' perceptions of the extent of their parents/carers future educational aspirations for them. Used as outcome in the MLM.	*My parent/carer…* q11a *wants me to do well at school* q11b *talks to me about school* q11c *thinks school is a waste of time* q11d *wants me to go to university* q11e *is interested in my future*	0.721	0.743	0.782
Attitude to learning (attitude). This represents the extent to which pupils have a positive attitude towards learning and school attendance. Used as outcome in the MLM.	q3c *I enjoy doing new things* q4a *I usually do well at school* q4b *My school work is interesting* q4c *I complete my homework on time* q4d *I usually look forward to coming to school* q4e *School work is a waste of time* q4f *I want to leave school as soon as I am old enough*	0.64	0.668	0.687

Confidence. This represents pupils' confidence in their ability to work effectively. Used as an outcome in the MLM.	q1a q1b q1d q2b q2c q3a q3b q3d	*I am good at working on my own* *I am good at solving problems* *I find it easy to look for information when I need it* *I can do things that are hard if I keep trying* *I can set targets for myself* *I can do things as well as other people my age* *I find it hard to do things well* *There are lots of good things about me*	0.75	0.767	0.772
General confidence in future career opportunities. This represents pupils' confidence in their ability to do what they want in the future. Not entered into the analyses.	*When I leave school…* q8a*……I will have lots of choices about the job I want to do* q8d *…..I can do any job I want* q8e*…..I can go to university if I want*		0.524	0.567	0.617
Academic self-awareness (self awareness). This represents the extent to which pupils' acknowledge their own academic ability and know what to do to improve. Not entered into the analyses.	q2a q2c q2d q2e	*I ask for help with my school work if I need it* *I can set targets for myself* *I know what I am good at* *I know what I need to do to improve my school work*	0.51	0.533	0.575
Access to sources of information about jobs (sources of information). This measures pupils' ability to access information about jobs (on a computer and by talking to people. Not entered into the analyses.	*If I want to find out more about a job I am able…* q7a *…to talk to teachers at school* q7b *to talk to people at home* q7c *to talk to my friends* q7d *to talk to someone who does that job* q7e *to find the information on a computer*		0.56	0.596	0.654

The following individual items were also used as outcomes in the modelling:

Table A3.2 Individual items from the pupil survey used as outcomes in the multi-level modelling analysis

Items and how used	Pupil survey question numbers and response items
Wanting to do a professional level job in the future. Measuring whether they wanted do a job from Social Occupational Classification (SOC) categories 1 and 2.	*When I grow up, I <u>want</u> to do a job like one of these …* q9b … Types of jobs where you have a profession or are in charge of people
Wanting to do an associate professional level job in the future. Measuring whether they wanted do a job from SOC categories 3 and 4.	*When I grow up, I <u>want</u> to do a job like one of these …* q9c … Types of jobs where you can use your skills or can keep people safe and well
Wanting to do a skilled job in the future. Measuring whether they wanted do a job from SOC categories 5 and 6.	*When I grow up, I <u>want</u> to do a job like one of these …* q9a … Types of jobs where you use your hands or look after people
Wanting to do a customer service/operative job in the future. Measuring whether they wanted to do a job from SOC categories 7 and 8.	*When I grow up, I <u>want</u> to do a job like one of these …* q9d … Types of jobs where you work in shops, factories or drive
Wanting to do an elementary job in the future. Measuring whether they wanted to do a job from SOC category 9	*When I grow up, I <u>want</u> to do a job like one of these …* q9e … Other types of jobs
Confidence in ability to do a professional level job in the future. Measuring confidence that they could do a job from Social Occupational Classification (SOC) categories 1 and 2.	*When I grow up, I <u>could do</u> a job like one of these …* q9b … Types of jobs where you have a profession or are in charge of people
Confidence in ability to do an associate professional level job in the future. Measuring confidence that they could do a job from SOC categories 3 and 4.	*When I grow up, I <u>could do</u> a job like one of these …* q9c … Types of jobs where you can use your skills or can keep people safe and well
Confidence in ability to do a skilled job in the future. Measuring confidence that they could do a job from SOC categories 5 and 6.	*When I grow up, I <u>could do</u> a job like one of these …* q9a … Types of jobs where you use your hands or look after people
Confidence in ability to do a customer service/operative job in the future. Measuring confidence that they could do a job from SOC categories 7 and 8.	*When I grow up, I <u>could do</u> a job like one of these …* q9d … Types of jobs where you work in shops, factories or drive
Confidence in ability to do an elementary job in the future. Measuring confidence that they could do a job from SOC category 9	*When I grow up, I <u>could do</u> a job like one of these …* q9e … Other types of jobs

A3.3 The school questionnaire analysis

Factor analysis and reliability analysis was also carried out on all 16 questions in the school questionnaire; this analysis determined the composites that would be used in the ANOVAs. Table A3.3 below shows the composites selected and the reliability outcomes for each at Sweeps 1 and 3. Please note that one of the composites ('Outside partners') was not found reliable enough at Sweep 3 and therefore was replaced by individual items instead. These composites and items were included in the multi-level modelling as predictor variables.

Table A3.3 School questionnaire factors

Composite and how used	School questionnaire question numbers and response items		Reliability test outcome at Sweep 1	Reliability test outcome at Sweep 3
Parental involvement. This measures the extent to which schools have sought to involve parents in CRL related activity, through needs analysis and/or in connected activity.	q1a5	*Formal needs analysis on – parents' attitudes into children's futures*	0.82	0.802
	q1a6	*Formal needs analysis on – parents' attitudes into children's aspirations*		
	q2a2	*Opportunities and horizons – staff discussing opportunities with parents*		
	q2a5	*Opportunities and horizons – staff encourage parents*		
	q2a6	*Opportunities and horizons – staff encourage parents to help children*		
	q2a9	*Opportunities and horizons – visitors encourage staff to help parents*		
Future opportunities. This measures the extent to which schools have addressed the issue of pupils' aspirations for the future, through needs analysis and/or related CRL activity.	q1a3	*Formal needs analysis on – Types of work pupils aspire to*	0.768	0.769
	q1a4	*Formal needs analysis on – what pupils think future might hold*		
	q2a1	*Opportunities and horizons – staff discussing career opportunities with pupils*		
Confidence and self-belief. This measures the extent to which schools have carried out a formal needs analysis on pupils' confidence, self esteem and/or self efficacy.	q1a1	*Formal needs analysis on –pupils' self-confidence/self-esteem*	0.829	0.777
	q1a2	*Formal needs analysis on – pupils' self-efficacy*		
Outside partners. This measures the extent to which schools have explored opportunities and horizons using outside partners to help and encourage pupils to	q2a7	*Opportunities and horizons - visitors encourage pupils*	0.641	0.354
	q2a	*Opportunities and horizons - visitors to encourage staff to help pupils*		

have higher aspirations.				
Visits away from school and staff encouragement (visits and encouragement). This measures the extent to which schools have explored opportunities and horizons by taking pupils on visits and through staff encouragement.	q2a3	*Opportunities and horizons - take pupils on visits* q2a4 *Opportunities and horizons - staff encourage pupils*	0.654	0.528

ANOVA (Analysis of variance)

Analysis of variance is a technique for assessing whether the distribution of the values of a particular measurement varies from one group to the other. The measurements used in this analysis were the composite measures derived from the school questionnaire responses. Analysis carried out at each Sweeps 1 and 3 enabled us to establish where the Pathfinder and comparison schools' CRL activities significantly differed from each other. The technique presents itself with the drawback that the relationship should not be interpreted as causal and it does not take into consideration any other background variables that may be associated with the composite measures.

A3.4 Multi-level modelling

MLM is a development of a common statistical technique known as regression analysis. This is a technique for finding a straight-line relationship which allows us to predict the values of some measure of interest ('dependent variable') given the values of one or more related measures. In the same way, it allows us to measure the association between a series of background variables and any change in the dependent variable.

MLM takes account of data which is grouped into similar clusters at different levels. A repeated measures multi-level model was used to analyse the pupil survey composites, which had been selected as outcomes. Four levels were used: LA, school, pupil and time point. Schools are grouped in LAs, pupils are grouped into these schools and for each pupil we have three records for each time point - Sweeps 1, 2 and 3. MLM allows us to take account of this hierarchical structure of the data and produce more accurate predictions, as well as estimates of the differences between schools and between LAs.

How we carried out the MLM analysis

All continuous variables were centred around the mean so that interpretation could be made in terms of movement from the 'average'. For instance, a positive correlation

indicated that, on average, pupils' outcome score was better than the average outcome score and a negative correlation indicated that, on average, pupils' outcome score was below the average outcome score. When the composites were used as an outcome in the model, the scale ranged from 0-100.

Overall, MLM looked for differences between respondent groups, change over time in outcomes and at the interaction of a range of background criteria with the outcomes.

- This compares the results of treatment and comparison groups and includes a change over time variable. A range of school and pupil-level background variables were included along with the interaction terms.

Table A3.4 below shows all of the predictors that were used in each of the models to explore outcomes. The 'comparator' column is important, as this accounts for how findings are interpreted and described. So, for instance, if 'rural' were found to be significantly different from non-rural against the outcome measure **general confidence in future career opportunities**, we would deduce that *pupils in rural schools, on average, and when compared to otherwise similar pupils in non-rural schools, had higher than average general confidence in future career opportunities scores.* If it was that the **headcount of pupils** correlated positively with confidence, we would deduce that *pupils in schools with an above average headcount, on average, and when compared to otherwise similar pupil in schools with a below average headcount, had higher than average confidence scores.*

Table A3.4 Predictor variables in the multi-level modelling analysis

Level/type of variable	Variable/predictor	Comparator
School level variables	Pathfinder	Comparison
	Rural	non-rural
	Junior	Primary/Combined
	Headcount of total No. of pupils	Continuous variables that have been centred around the mean so that outcome is interpreted as being better than the average (mean) or below the average
	% EAL pupils (2008)	
	% of pupils with statements (2008)	
	No. of different ethnic categories	
	% pupils eligible for Free School meals (2008)	
Pupil level variables	Girl	Boy
	Year 5	Year 6
	Free school meals	not on Free school meals
	Asian	White
	Black	
	Chinese	
	Other ethnic group	

	Mixed ethnicity	
	SEN	No SEN
	EAL	Not EAL
	Gifted and talented	Not gifted and talented
	Those achieving lower than expected level at Key Stage1	Those achieving at or above expected level at Key Stage1

Table A3.5 Outcome Variables in the multi-level modelling (dependent variables)

Level/type of variable	Variable/outcome	Comparator
Pupil survey composites	Confidence	Scale of 0-100 when used as outcomes in the models
	Attitude to learning	
	Stereotypical thinking	
	Effectiveness of school's CRL	
	Perceptions of Parents' Aspirations	
	Could do a professional job	
	Could do an associate professional job	
	Could do a skilled job	
	Could do a customer service/operative job	
	Could do an elementary job	

A3.5 The data sets used and types of analysis conducted on them

National Pupil Database (NPD)

This is a national dataset which contains pupil-level personal background data such as attainment and ethnicity. This was used to provide pupil-level variables.

Sweep 1 survey data

This is the first round of the survey data that has been collected from the Pathfinder and Comparison schools taking part in the RAZ project. Factor analysis was carried out to summarise data from groups of similar questions. Reliability analysis was also carried out on the factors generated to ensure that the questions grouped together were indeed measuring the same thing. All the factors which have been used for further analysis had reliability coefficients of greater than 0.5.

School questionnaire data

This is school-level rather than pupil-level data. This data was collected from schools asking them about their CRL-related provision. This exercise was undertaken at the Sweep 1 and Sweep 3 stages. A total of 126 and 107 schools returned school questionnaire data at Sweep 1 and Sweep 3 respectively. Factor and reliability analysis were applied to these data.

Sweep 2 and 3 survey data

This is the pupil-level survey data and the same Sweep 1 survey was repeated for all treatment and comparison schools. Note that there were a number of pupils who missed one or more Sweep survey (probably due to absence). The numbers are summarised below in Table 5.

Table A3.6 Pupil survey sample numbers (at interim analysis stage)

Data source	Number of cases
Sweep 1 Data	5545
Sweep 2 Data	5403
Sweep 2 data not in Sweep 1 (124 schools)	*334*
No Sweep 2 data returned from Sweep 1 schools (112 schools)	*476*
Sweep 1 and Sweep 2 data	5069
Number of pupils excluded due to propensity scoring	*421*
Final number of pupils used for the MLM analysis	**4648**

Register of Schools (ROS) database

This is an NFER database that stores school-level characteristics and variables were used in the multi-level modelling to control for between-school differences. Table 3 provides a full list of all variables used.

The data-matching exercise

First the NPD data was matched onto the Sweep 1 data. The purpose of this matching exercise was to obtain background information of the pupils in this study, which would then be used for carrying out the multi-level modelling analysis. The background variables that were matched were:

- prior attainment data (Key Stage 1 scores for speaking and listening, reading, writing, maths, and science)
- ethnicity

- Free-School Meals eligibility
- Special Educational Needs provision
- English as an Additional Language
- Gifted and Talented
- gender (in case missing from survey)
- year group (in case missing from survey).

This continuous measure of prior attainment is rather complex to present as an interaction in the multi level model. For the ease of interpretation of the interaction term, the attainment was converted into binary measure- those achieving below expected level at Key Stage 1 compared to those achieving at or above expected level at Key Stage 1 (Level 2c or above) (using QCA guidance).

The following table presents the summary of data matching that took place. The multi-level modelling included those pupil-level survey data for those who responded to Sweep 1 and either Sweep 2 or Sweep 3. Table 9 summarises the numbers.

Table A3.7 Pupil survey sample numbers (At final analysis stage)

Data source	Number of cases
Sweep 1 Data	5545
Sweep 2 Data	5403
Sweep3 Data	*5284*
No Sweep 1 data	*294*
No Sweep 2 data	*195*
No Sweep 3 data	424
All three Sweeps worth data	*4645*
Sweep1 and one another Sweep (Either Sweep 2 or Sweep 3)	*5264*
Number of pupils with NPD data	*5188*
Number of pupils excluded due to mix up of the intervention in one school	*62*
Number of pupils excluded due to propensity scoring	*326*
Number of pupils with school questionnaire data	4256
Final number of pupils used for the MLM analysis	**4876**

A3.6 Multi-level modelling results

Below tables present the relationship between outcome variables and each of the pupil and school characteristics explored as part of analysis (Models A – J). Only the variables that were found to have a statistically significant relationship with the outcome are presented below. The full list of the variables entered into the models,

along with their comparators, can be found in Table A3.5 above. The raw coefficients show the average change in the outcome variable associated with a change of one unit in each of the background variables, taking account of all the other variables in the model. However, different predictor variables have different units and are not directly comparable to each other. Therefore, we have also presented the results using effect sizes (also known as 'normalised coefficients'). They represent the expected change in outcome (expressed as a percentage of the standard deviation in the outcome) for one standard deviation change in the predictor variable. This measure does not have any units and can be compared directly with the normalised coefficients for other variables. This provides us with a method by which we can rank variables in order of importance.

To aid interpretation, the variables in the tables are ranked into two groups:

- the first group, highlighted in grey, shows the variables that have the strongest positive association with the outcome, in descending order (the strongest positive correlation is listed first)
- the second group, not highlighted, shows the variables that have the strongest negative association with the outcomes, in descending order (the strongest negative correlation is listed first).

Table A3.8, Model A Pupil outcome: confidence

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Gifted and talented	1	5.96	14.65
Sweep 3	2	1.76	5.64
% of pupils with statements (2008) in school	3	0.72	4.36
Black	4	2.63	3.50
Interaction of FSM and Sweep 2 and Pathfinder	5	3.10	2.94
Interaction of FSM and Sweep 3 and Pathfinder	6	2.23	2.01
Interaction of EAL and Sweep 3	7	1.31	1.55
SEN	1	-6.47	-18.28
Below expected level in KS1 attainment	2	-4.99	-12.23
Missing info on pupil level prior attainment	3	-2.74	-6.61
Interaction of Year 5 and Pathfinder	4	-2.82	-5.18
Interaction of FSM and Pathfinder	5	-2.57	-4.11
Girl	6	-0.91	-3.13

All variables presented were significant at the 0.05 level.

Table A3.9, Model B Pupil outcome: attitude to learning

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Girl	1	5.26	16.95
Gifted and talented	2	3.05	7.02
EAL	3	3.11	5.87
Asian	4	2.37	3.34
SEN	1	-4.50	-11.90
Below expected level in KS1 attainment	2	-2.74	-6.28
Missing info from NPD	3	-3.05	-5.97
Sweep 2	4	-1.19	-3.62
Interaction of FSM and Sweep 3	5	-1.62	-2.62
Sweep 3	6	-0.80	-2.39

All variables presented were significant at the 0.05 level.

Table A3.10, Model C Pupil outcome: stereotypical thinking

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Sweep 3	1	9.15	19.66
Girl	2	8.07	18.63
Sweep 2	3	5.59	12.18
Gifted and talented	4	5.45	8.97
No. of different ethnic categories	5	0.49	8.37
Interaction Sweep 3 and pathfinder	6	4.42	5.55
Interaction of Girl and Pathfinder	7	3.27	5.08
Interaction Sweep 2 and pathfinder	8	3.23	4.21
% pupils eligible for Free School meals (2008) in school	1	-0.14	-11.26
Below expected level in KS1 attainment	2	-5.26	-8.64
Year 5	3	-4.48	-8.61
SEN	4	-4.10	-7.75
Missing info on pupil level prior attainment	5	-3.81	-6.15
Interaction of FSM and Pathfinder	6	-4.13	-4.41
Interaction of Below KS1 and Sweep 3	7	-2.96	-2.88
Interaction of Girl and Sweep 2 and Pathfinder	8	-2.97	-2.81
Interaction of Girl and Sweep 3 and Pathfinder	9	-2.60	-2.38

All variables presented were significant at the 0.05 level.

Table A3.11, Model D Pupil outcome: perceived CRL effectiveness

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
% pupils eligible for Free School meals (2008) in school	1	0.20	18.12
Pathfinder	2	4.54	10.52
Interaction Sweep 3 and pathfinder	3	4.81	6.94
Below expected level in KS1 attainment	4	2.50	4.71
EAL	5	2.87	4.46
Interaction Sweep 2 and pathfinder	6	2.89	4.33
Interaction of SEN and Sweep 2 and Pathfinder	7	5.56	4.10
Sweep 3	8	1.36	3.36
Interaction of SEN and Sweep 3 and Pathfinder	9	4.21	2.96
Interaction of G and T and Sweep 3 and Pathfinder	10	3.53	2.13
Interaction of Year 5 and Sweep 3	1	-3.14	-4.20
Interaction of Below KS1 and Sweep 2 and Pathfinder	2	-5.51	-3.37
Interaction of SEN and Sweep 2	3	-1.98	-2.71
Interaction of Year 5 and Sweep 2	4	-1.57	-2.22

All variables presented were significant at the 0.05 level.

Table A3.12, Model E Pupil outcome: perceived parental aspirations

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Gifted and talented	1	2.45	5.79
Black	2	3.26	4.17
Girl	3	1.24	4.11
Interaction of EAL and Pathfinder	4	5.51	3.92
% of pupils with statements (2008) in school	5	0.67	3.90
Asian	6	2.44	3.54
Sweep 2	7	1.12	3.49
SEN	1	-2.98	-8.10
Below expected level in KS1 attainment	2	-1.86	-4.37
Missing info from NPD	3	-1.89	-3.81

All variables presented were significant at the 0.05 level.

Table A3.13, Model F Pupil outcome: confidence that they could do a managerial or professional job in the future

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Girl	1	5.63	12.09
Gifted and talented	2	4.62	7.07
Interaction of Girl and Pathfinder	3	3.70	5.35
Interaction of SEN and Pathfinder	4	4.43	4.44
Interaction of Year5 and Sweep 3 and Pathfinder	5	5.62	3.56
Sweep 3	6	1.70	3.40
Interaction of FSM and Sweep 2 and Pathfinder	7	5.51	3.25
Asian	8	3.39	3.19
Interaction of Year 5 and Sweep 2 and Pathfinder	9	4.34	3.00
Black	10	3.15	2.61
SEN	1	-4.92	-8.67
Interaction of Year 5 and Pathfinder	2	-5.52	-6.31
Below expected level in KS1 attainment	3	-3.47	-5.30

All variables presented were significant at the 0.05 level.

Table A3.14, Model G Pupil outcome: confidence that they could do an associate professional or administrative/secretarial job in the future

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Gifted and talented	1	3.03	4.95
% pupils eligible for Free School meals (2008) in school	2	0.06	4.74
Year 5	3	2.05	3.91
Sweep 3	4	1.64	3.51
Interaction of Girl and Sweep 2	5	1.78	3.04
Girl	1	-6.35	-14.56
Below expected level in KS1 attainment	2	-4.68	-7.63
% of pupils with statements (2008) in school	3	-0.73	-2.97
Interaction of Year 5 and Sweep3	4	-2.16	-2.49

All variables presented were significant at the 0.05 level.

Table A3.15, Model H Pupil outcome: confidence that they could do a skilled or personal care job in the future

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Girl	1	3.92	8.63
Sweep 3	2	3.41	6.99
Interaction of SEN and Pathfinder	3	6.06	6.22
Interaction of Girl and Pathfinder	4	3.01	4.46
FSM	5	2.02	3.66
Sweep 2	6	1.63	3.38
Interaction of Year 5 and Sweep 3 and Pathfinder	7	4.94	3.21
SEN	1	-2.95	-5.32
Interaction of Year 5 and Pathfinder	2	-3.75	-4.39
Interaction of EAL and Pathfinder	3	-7.09	-3.34
Interaction of Girl and Sweep 2 and Pathfinder	4	-3.60	-3.25
Asian	5	-3.36	-3.24
Other Ethnicity	6	-6.41	-2.79
Interaction of EAL and Sweep 3	7	-3.12	-2.36

All variables presented were significant at the 0.05 level.

Table A3.16, Model I Pupil outcome: confidence that they could do a sales/customer service or factory/driving job in the future

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Sweep 3	1	3.36	6.03
Interaction of SEN and Pathfinder	2	5.72	5.14
Interaction of Girl and Sweep 3	3	3.26	4.60
Gifted and talented	4	2.98	4.09
Girl	1	-4.41	-8.48
EAL	2	-4.34	-4.89
Below expected level in KS1 attainment	3	-3.14	-4.29
Black	4	-3.48	-2.58

All variables presented were significant at the 0.05 level.

Table A3.17, Model J Pupil outcome: confidence that they could do an elementary job in the future

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Sweep 3	1	5.21	9.52
Girl	2	4.22	8.28
Gifted and talented	3	4.18	5.85
Sweep 2	4	2.30	4.26
EAL	1	-5.10	-5.86
Below expected level in KS1 attainment	2	-3.88	-5.42
Other Ethnicity	3	-11.02	-4.28
Interaction of G and T and Pathfinder	4	-5.25	-4.09
Asian	5	-4.75	-4.07
SEN	6	-2.52	-4.05
Black	7	-4.62	-3.49

All variables presented were significant at the 0.05 level.

Table A3.18, Model K Pupil outcome: wanting to do a managerial or professional job in the future (and association of stereotypical thinking with this)

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Girl	1	9.87	17.55
Asian	2	6.87	5.33
Stereotypical thinking	3	0.06	4.96
% EAL pupils (2008)	4	0.16	4.84
Black	5	6.52	4.47
Year5	6	2.72	4.03
Interaction of Year5 & Sweep3 & Pathfinder	7	6.73	3.53
Other Ethnicity	8	8.67	3.05
Interaction of Year5 & Sweep2 & Pathfinder	9	4.83	2.77

All variables presented were significant at the 0.05 level.

Table A3.19, Model L Pupil outcome: wanting to do an associate professional or administrative/secretarial job in the future (and association of stereotypical thinking with this)

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Interaction of Year5 & Sweep3 & Pathfinder	1	5.59	3.10
Interaction of Below KS1 & Sweep3	2	3.07	2.43
Girl	1	-11.14	-20.91
Interaction of Below KS1 & Sweep3 & Pathfinder	2	-8.62	-3.64
Stereotypical thinking	3	-0.04	-3.24
Below expected level in KS1 attainment	4	-3.74	-4.99
Interaction of Year 5 & Sweep 3	5	-2.55	-2.42

All variables presented were significant at the 0.05 level.

Table A3.20, Model M Pupil outcome: wanting to do a skilled or personal care job in the future (and association of stereotypical thinking with this)

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Girl	1	9.64	17.26
% pupils eligible for Free School meals (2008)	2	0.13	8.11
SEN	3	4.40	6.46
Year5	4	2.86	4.27
FSM	5	2.78	4.09
Interaction of Girl & Sweep2	6	2.25	3.00
Interaction of Year5 & Sweep3 & Pathfinder	7	4.75	2.51
Gifted and talented	1	-5.10	-6.51
Interaction of EAL & Pathfinder	2	-13.17	-5.05
No. of different ethnic categories	3	-0.38	-5.01
Asian	4	-5.91	-4.62
Stereotypical thinking	5	-0.06	-4.92
Black	6	-4.79	-3.31
Interaction of Girl & Sweep2 & Pathfinder	7	-4.26	-3.13
Sweep 2	8	-1.85	-3.13

All variables presented were significant at the 0.05 level.

Table A3.21, Model N **Pupil outcome: wanting to do a sales/customer service or factory/driving job in the future (and association of stereotypical thinking with this)**

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
% pupils eligible for Free School meals (2008)	1	0.13	8.31
SEN	2	4.13	6.55
Interaction of Girl & Pathfinder	3	4.84	6.31
Below expected level in KS1 attainment	4	4.46	6.14
Year5	5	2.64	4.26
Interaction of Girl & Sweep3	6	2.27	3.22
Interaction of Year5 & Sweep3 & Pathfinder	7	4.92	2.81
stereotypical	1	-0.09	-7.66
Gifted and talented	2	-4.33	-5.97
No. of different ethnic categories	3	-0.40	-5.65
Interaction of Girl & Sweep3 & Pathfinder	4	-6.48	-4.97
Sweep 2	5	-2.41	-4.41
Sweep 3	6	-2.38	-4.29
Interaction of Girl & Sweep2 & Pathfinder	7	-5.16	-4.10
Interaction of EAL & Pathfinder	8	-8.57	-3.55
Mixed	9	-4.34	-3.42

All variables presented were significant at the 0.05 level.

Table A3.22, Model O **Pupil outcome: wanting to do an elementary job in the future (and association of stereotypical thinking with this)**

Variable	Rank	Unstandardised coefficients (Beta)	Effect Size
Girl	1	9.47	17.69
Year5	2	3.73	5.80
% pupils eligible for Free School meals (2008)	3	0.08	5.34
SEN	4	2.99	4.58
Interaction of Year5 & Sweep3 & Pathfinder	5	4.51	2.49
stereotypical	1	-0.10	-7.91
EAL	2	-4.35	-4.76
Asian	3	-5.33	-4.35
Black	4	-5.46	-3.93
Interaction of G&T & Pathfinder	5	-5.29	-3.92
% of pupils with statements (2008)	6	-0.95	-3.13
Interaction of Girl & Sweep3 & Pathfinder	7	-3.99	-2.95
Other Ethnicity	8	-6.77	-2.50
Interaction of Year5 & Sweep3	9	-2.47	-2.32

All variables presented were significant at the 0.05 level.

Appendix 4 Technical appendix: Descriptive statistics

The third Sweep of the KS2 Raising Aspirations pathfinder evaluation survey was conducted in schools during late June and early July 2010. We used two data collection instruments during this sweep, which were the:

- School questionnaire; and,
- Pupil survey.

This appendix presents the basic frequency data gathered during Sweep 3 for all questions in both the pupil survey and the school questionnaire. Tables show basic frequencies per question item, for both treatment and comparison schools. Shading is used to distinguish between items within the tables.

The tables for the pupil survey use actual per cent based on the number of pupils for whom questionnaires were returned. The number of respondents is indicated under each table. Where applicable, we have included a note about any missing responses in a footnote to each table. Significance tests were not employed in this analysis as multi-level modelling was used to explore change over time in some of the outcomes, interactions between variables and correlations of background characteristics to selected outcomes (see Analysis Technical Appendix sent under separate cover).

Figure 1 below shows that in relation to sample stratifiers the comparison schools were representative of the schools in the seven LAs selected to run the CRL pilot. The treatment schools were also representative of the schools in the seven LAs, except for the proportion of pupils attending the schools with English as an additional language (EAL). The comparison and treatment schools both compared well to primary schools nationally in terms of type and the proportion of pupils eligible for free school meals (FSM), but they were not fully representative in terms of the other stratifiers.

Figure A4.1: Sample representativeness

Representative comparison	Stratifiers at sweep 2 which are: representative	not representative	similar to sweep 1?	similar to sweep 2?
*Treatment Vs Comparison	Type, % pupils in FSM bands, KS2 Achievement Band 2008	Region, % of EAL pupils	Yes	Yes
Comparison schools Vs schools in seven LAs	All representative		Yes	Yes
*Treatment schools Vs schools in seven LAs	Region, Type, % pupils in FSM bands, KS2 Achievement Band 2008	% of EAL pupils	Yes	Yes
Comparison Vs all Primary schools in England	Type, % pupils in FSM bands	Region, KS2 Achievement Band 2008, % of EAL pupils	Yes	No
*Treatment Vs all Primary schools in England	Type, % pupils in FSM bands	Region, KS2 Achievement Band 2008, % of EAL pupils	Yes	Yes

A Pearson Chi-Square test was carried out to measure the differences between groups.
Note that the multi-level modelling analyses used to explore change over time in some of the outcomes controlled for the influence of any background differences between schools.
**For groups with sample size lower than 5, the Likelihood Ratio was used rather than Pearson Chi-Square to measure the difference between groups.*

A4.1 Pupil survey

A4.1.1 About you

Table A4.1, Question 1: I am good at:

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
working on my own	Treatment	26	52	15	3	1
	Comparison	26	49	18	3	2
solving problems	Treatment	23	47	22	5	1
	Comparison	22	47	22	5	2
working with other people	Treatment	46	39	10	2	1
	Comparison	46	37	11	2	1
looking for information	Treatment	25	41	24	6	1
	Comparison	27	39	23	6	2

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were two to three per cent)

Table A4.2, Question 2: Attitude to learning:

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
ask for help with work	Treatment	45	44	7	2	1
	Comparison	43	45	8	3	1
can do hard things	Treatment	43	42	12	2	1
	Comparison	42	41	13	2	1
set targets	Treatment	31	42	21	4	2
	Comparison	31	39	23	4	2
know what good at	Treatment	63	28	7	1	0
	Comparison	59	30	10	1	1
improve my school work	Treatment	42	39	15	3	1
	Comparison	41	37	18	2	1

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were zero to one per cent)

Table A4.3, Question 3: About me:

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
can do things as well as other people	Treatment	36	38	19	4	2
	Comparison	37	35	21	4	2
hard to do things well	Treatment	6	15	24	34	21
	Comparison	6	13	23	34	24
enjoy new things	Treatment	66	28	5	1	0
	Comparison	60	30	7	1	1
good things about me	Treatment	47	34	16	2	1
	Comparison	48	33	15	2	1

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were one per cent)

Table A4.4, Question 4: Attitude to school:

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
do well at school	Treatment	39	47	11	2	1
	Comparison	39	45	13	1	1
school work is interesting	Treatment	28	42	23	4	2
	Comparison	27	41	24	5	3
complete my homework	Treatment	37	30	17	9	6
	Comparison	41	29	17	7	5
look forward to school	Treatment	31	35	15	9	8
	Comparison	29	34	19	9	8
school waste of time	Treatment	5	3	11	21	60
	Comparison	5	3	11	24	55
want to leave school	Treatment	22	12	27	17	22
	Comparison	24	12	26	16	21

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were zero to two per cent)

A4.1.2 Different jobs

Table A4.5, Question 5: Stereotypical attitudes?

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
women cleaners	Treatment	23	16	19	19	20
	Comparison	23	15	22	22	20
men design	Treatment	8	6	30	30	30
	Comparison	10	8	33	33	26
easier for boys	Treatment	9	8	28	23	31
	Comparison	10	10	31	31	28
being black harder	Treatment	5	6	20	20	54
	Comparison	5	6	21	21	51
nurse not for a man	Treatment	9	6	13	13	47
	Comparison	11	7	16	16	40
plumber not for a woman	Treatment	11	10	17	17	36
	Comparison	15	9	21	23	31
naughty people Police	Treatment	32	18	24	24	13
	Comparison	31	14	28	28	14

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were zero to two per cent)

A4.1.3 Learning about jobs at school

Table A4.6, Question 6: My school is good at helping me to:

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
find out different jobs	Treatment	53	38	6	2	1
	Comparison	28	36	23	9	4
learn about the places where people work	Treatment	45	42	10	2	1
	Comparison	28	40	21	7	3
find out about jobs in other countries	Treatment	27	30	29	10	3
	Comparison	23	32	27	12	5
learn about jobs in different parts of this country	Treatment	36	35	20	5	2
	Comparison	23	33	28	10	4
learn about university	Treatment	45	30	16	5	3
	Comparison	24	21	26	17	10
learn about secondary school	Treatment	69	23	5	1	1
	Comparison	62	27	7	2	2

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were zero to two per cent)

Table A4.7, Question 7: If I want to find out more about a job I am able to:

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
talk to teachers	Treatment	46	36	13	3	2
	Comparison	36	35	20	5	3
talk to people at home	Treatment	67	26	5	1	1
	Comparison	65	28	4	1	1
talk to my friends	Treatment	39	31	20	6	3
	Comparison	37	31	20	7	4
talk to someone who does job	Treatment	47	29	18	4	2
	Comparison	43	28	19	5	4
find information on computer	Treatment	55	30	9	3	2
	Comparison	50	31	12	3	3

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were zero to one per cent)

A4.1.4Choices in the future

Table A4.8, Question 8: When I leave school:

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
I will have lots of choices about the job I want to do	Treatment	45	33	19	2	1
	Comparison	40	30	25	3	1
It will be difficult to get a job	Treatment	7	8	39	26	19
	Comparison	6	9	38	25	20
I will have more choices if I have done well with my schoolwork	Treatment	61	26	11	1	1
	Comparison	60	25	11	1	1
I can do any job I want	Treatment	25	19	30	17	8
	Comparison	22	16	33	18	10
I can go to university if I want	Treatment	50	24	18	3	3
	Comparison	44	25	21	4	4

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were zero to one per cent)

Table A4.9a, Question 9a: Types of jobs where you use your hands or look after people

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
want to do a job	Treatment	14	17	21	18	26
	Comparison	14	16	20	20	27
could do a job	Treatment	30	39	18	4	7
	Comparison	25	38	21	5	8

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were three to four per cent)

A4.1.5 Want to/could do jobs

Table A4.9b, Question 9b: Types of jobs where you have a profession or you are in charge of people

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
want to do a job	Treatment	20	20	20	17	21
	Comparison	25	22	20	13	17
could do a job	Treatment	25	33	24	6	8
	Comparison	25	33	23	5	8

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were three to five per cent)

Table A4.9c, Question 9c: Types of jobs where you can use your skills or can keep people safe and well

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
want to do a job	Treatment	34	24	17	11	12
	Comparison	37	24	18	9	10
could do a job	Treatment	33	34	19	4	6
	Comparison	33	34	21	3	5

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were two to four per cent)

Table A4.9d, Question 9d: Types of jobs where you work in shops, factories or drive

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
want to do a job	Treatment	7	10	17	23	40
	Comparison	8	9	14	23	42
could do a job	Treatment	25	29	22	8	11
	Comparison	21	28	23	8	15

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were three to five per cent)

Table A4.9e, Question 9e: Other types of jobs

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
want to do a job	Treatment	10	15	24	19	29
	Comparison	10	13	20	21	32
could do a job	Treatment	27	31	22	6	10
	Comparison	23	30	23	6	13

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were three to five per cent)

Table A4.10, Question 10a: Have you thought about what you would really like to do when you grow up?

Sample group	% responding Thought what to do? Yes	No
Treatment	88	11
Comparison	87	12

Treatment n=1236; Comparison n=3986. A single response item. Percentages might not sum to 100 due to rounding and/or missing responses (which were one per cent)

Table A4.10b, Question 10b: What job would you like to do?

Job title/role	% of cases	N=
Football player/Professional footballer	15	677
Other sports persons (e.g. Olympic athlete/Golfer)	13	575
Teacher/Teaching professionals	11	505
Hairdresser/Barber/Beautician	11	485
Artist	9	421
Doctor/Professional Medical Practitioner	8	376
Scientist/Physicist/Chemist/Mathematician	7	338
Designer (e.g. fashion/interior)	7	298
Actor/Actress/Comedian/Stuntman	6	250
Policeman/Police officer	5	238
Singer/Musician	5	233
Member of armed forces	5	216
Vet	4	197
Childcare workers	4	191
Animal care workers	4	179
Shop workers and related salespersons	3	155
Vehicle mechanics	3	145
Dancer/Choreographer	3	142
Journalist/Author	3	141
Legal professionals (e.g. lawyer)	3	131
Waiter/Waitress/Bar staff	3	128
Chef/Cook	3	126
Building trades	3	124
Have own business	3	120
Manager	2	111
Nurse/Midwife	2	92
Travel/Tourism workers/stewards	2	79
Fireman/Fire fighter	2	76
Architect	2	69
Instructors (e.g. driving instructor)	1	64
Other relevant/vague comment	1	64
Pilot/Air traffic controller	1	62
Photographer/Film maker	1	58
Accountant/Chartered Accountant/ Professional Banker	1	53
Model	1	52
Dentist	1	50
Engineering professionals	1	48
Don't know/Not sure	< 1	38
Computer/IT technicians	< 1	37
Computer professionals	< 1	34
Go to university	< 1	34
Lorry/Truck/HGV driver	< 1	33
Medical technicians/Paramedic	< 1	31
Radio/TV presenter	< 1	30
Secretaries	< 1	30

Travel/Move abroad	< 1	27
Personal care workers	< 1	26
Electrical/Electronics Mechanics/Fitters	< 1	16
Medical therapists	< 1	14
Computer/IT operators	< 1	14
Woodworking trades	< 1	14
Post man/lady	< 1	14
Food preparation trades (e.g. Butcher/ Fishmonger/Baker)	< 1	13
Farm/Fish/Forestry workers	< 1	13
Civil servants/Government Officials	< 1	12
Irrelevant/Uncodeable	< 1	12
Cleaner	< 1	10
Routine process operatives	< 1	9
Digger/Fork lift truck driver	< 1	9
Office worker (general)	< 1	8
Cashier/Bank teller	< 1	8
Factory worker	< 1	8
Teaching support assistants	< 1	7
Sales/Financial Service Associate (e.g. insurance broker/Estate Agent)	< 1	7
Social worker	< 1	6
Priest/Clergy	< 1	5
Metalworking trades	< 1	5
Car/Taxi/Van driver	< 1	5
Gardeners	< 1	5
Spy	< 1	5
Interpreter/Translator	< 1	4
Parent/Have a family	< 1	4
Librarian/Curator	< 1	3
Textile/Garment trades	< 1	3
Bus/Tram drivers	< 1	3
Seafarer/Boatman	< 1	3
Labourer	< 1	3
Administrators	< 1	1
Personal Assistants	< 1	1
Train drivers	< 1	1
Machine operators	< 1	1
Messenger/Porter	< 1	1
Security guard	< 1	1
Total		7857

A multiple response open-ended question, hence a total of 7857 responses were provided to this question. More than one answer could be put forward so percentages do not sum to 100. Four per cent of respondents did not provide an answer to this question.

A4.1.6 About your family

Table A4.11, Question 11: Beliefs about parents' and carers' attitudes

	Sample group	% responding: strongly agree	agree	not sure	disagree	strongly disagree
wants me to do well	Treatment	81	11	1	0	0
	Comparison	81	9	1	0	0
talks about school	Treatment	52	31	6	2	2
	Comparison	54	28	5	2	1
school waste of time	Treatment	2	1	4	10	76
	Comparison	2	1	4	9	73
wants me to go to university	Treatment	42	17	31	1	3
	Comparison	47	15	25	1	2
interested in my future	Treatment	63	17	11	1	1
	Comparison	65	15	8	1	1

Treatment n=1236; Comparison n=3986. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were six to ten per cent)

A4.2 School questionnaire

Table A4.12, Question 1A: Formal needs analysis

	Sample group	% responding do it	plan to	no plans	not sure	not needed
pupils' confidence/self esteem	Treatment	65	6	6	16	3
	Comparison	68	13	12	7	0
pupils' self-efficacy	Treatment	55	10	16	13	3
	Comparison	64	13	12	8	0
types of work aspire to	Treatment	55	19	16	6	0
	Comparison	54	18	21	7	0
what future might hold	Treatment	58	16	19	6	0
	Comparison	61	16	18	5	0
parents' attitudes into children's futures	Treatment	35	26	29	6	0
	Comparison	20	21	38	21	0
parents' attitudes to children's aspirations	Treatment	26	32	29	13	0
	Comparison	12	22	47	18	3

Treatment n=31; Comparison n=76. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were zero to three per cent)

Table A4.13, Question 2A: To raise awareness of opportunities, the school uses:

	Sample group	% responding				
		do it	plan to	no plans	not sure	not needed
staff discuss career opportunities with pupils	Treatment	74	13	10	0	3
	Comparison	43	18	20	12	3
staff discuss pupils' career opportunities with parents	Treatment	35	32	19	10	3
	Comparison	3	12	58	21	5
staff take pupils on visits	Treatment	100	0	0	0	0
	Comparison	80	8	7	4	0
staff encourage pupils to raise their aspirations	Treatment	100	0	0	0	0
	Comparison	91	4	3	1	0
staff encourage parents to explore aspirations for children	Treatment	39	32	16	10	0
	Comparison	33	20	26	17	1
staff encourage parents to help children to have realistically high aspirations	Treatment	52	29	13	3	0
	Comparison	41	16	22	17	1
use visitors to encourage pupils to explore aspirations	Treatment	97	3	0	0	0
	Comparison	88	7	1	3	0
use visitors to help staff to raise pupils' aspirations	Treatment	84	13	3	0	0
	Comparison	70	12	8	9	0
use visitors to help staff to help raise parents' aspirations for children	Treatment	55	6	23	16	0
	Comparison	37	14	29	16	1
use drama/theatre groups	Treatment	94	0	3	0	0
	Comparison	82	4	7	0	0

Treatment n=31; Comparison n=76. A series of single response items. Percentages might not sum to 100 due to rounding and/or missing responses (which were zero to four per cent)

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