EFFECTIVE PRE-SCHOOL AND PRIMARY EDUCATION 3-11 PROJECT (EPPE 3-11)

PUPILS' SELF-PERCEPTIONS AND VIEWS OF PRIMARY SCHOOL IN YEAR 5

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Introduction

The Effective Pre-School and Primary Education 3-11 (EPPE 3-11) project investigates the impact of pre-school, primary school and family on a range of outcomes for a national sample of approximately 2,800 children in England between the ages of 3 and 11 years. This Research Brief presents findings on pupils' Self-perceptions ('*Enjoyment of school', 'Anxiety and Isolation', 'Academic self-image' and 'Behavioural self-image'*) and their views of different features of primary school ('*Teachers' support for pupils' learning', 'Headteacher qualities' and 'Positive social environment'*) in Year 5. The analyses involved two steps: first, differences in pupils' Self-perceptions and Views of primary school measured at Year 5 were explored, in relation to child, family and Home Learning Environment (HLE) characteristics. Second, the relationships between pupils' Self-perceptions and their Views of primary school and educational outcomes and progress, both cognitive (Reading and Mathematics) and social/behavioural ('Self-regulation', 'Hyperactivity', 'Pro-social' and 'Anti-social' behaviour) were investigated. The analyses also explored pupils' Self-perceptions measured at a younger age (Year 2) and how they relate to children's later cognitive and social/behavioural outcomes in Year 5 and progress from Year 1 to Year 5.

Key Findings

Differences in Pupils' Self-perceptions
Child, Family and HLE characteristics

- Children had generally positive self-perceptions and only a small minority gave negative responses. Background factors such as gender, birth weight, Free school meals (FSM) status, Early years HLE and Special Educational Needs (SEN) status showed moderate associations with pupil's self-perceptions across a range of outcomes.
- Girls seem to enjoy school more in Year 5 and tend to have a better 'Behavioural self-image' than boys, but they have raised scores for 'Anxiety and Isolation'. However, boys and girls do not have a significantly different 'Academic self-image' at this age.
- Children eligible for Free school meals (FSM) reported that they enjoyed school more but had somewhat poorer 'Behavioural self-image' in Year 5 although the latter effect was quite weak. This suggests that the influence of social disadvantage may vary for different outcomes.
- Children who had experienced a better Early years HLE showed a more favourable 'Academic self-image' in Year 5. The results suggest that a better Early years HLE may have an indirect protective influence on later outcomes via its relationship to higher 'Academic self-image', as well as being an important predictor of academic and social/behavioural outcomes in its own right.

Pre-school and Primary school influences
- Children who had attended high quality pre-schools showed higher scores for 'Behavioural self-image' and 'Enjoyment of school' in Year 5 than children who had attended low quality pre-schools.
- Children who attended more academically effective primary schools had a more positive 'Behavioural self-image' in Year 5.
- Significant variation exists between schools in the self-perceptions of their pupils, especially for 'Enjoyment of school' and 'Academic self-image'.

Differences in Pupils' Views of primary school
- Children were generally positive about most aspects of their primary school, with only a small minority giving negative responses. Children who scored more highly on 'Enjoyment of school' were also more positive in their ratings of 'Headteacher qualities', 'Teachers' support for pupils' learning' and the social environment of their school.

Child, Family and HLE characteristics
- Girls were more positive in their ratings of 'Headteacher qualities' and were more likely to view their school as having a 'Positive Social Environment' than boys. Children entitled to FSM had more positive views of 'Teachers' support for pupils' learning', whereas children from families with higher salaries had more positive views of the social environment in their school. In addition, children from the lowest Early years HLE group had less favourable views of the social environment in their school than children who had experienced the highest HLE at a young age.

Pre-school and Primary school influences
- Children who had attended a high or medium quality pre-school were more likely to view their primary school as having a 'Positive Social Environment' in Year 5 than children who had not attended pre-school.
- Significant variation exists between schools in pupils' self-reported experiences of the classroom and school environment, particularly for the 'Headteacher qualities' and 'Positive Social Environment' factors, which suggests there are important differences in children's primary school experiences.

Relationships between Pupils' Self-perceptions and progress
'Academic self-image' and 'Behavioural self-image'
- Of all self-perception measures, pupils' 'Academic self-image' was found to be the strongest predictor for progress in Reading, Mathematics and 'Self-regulation', controlling for background characteristics. Similarly, pupils' 'Behavioural self-image' was the strongest predictor of 'Hyperactivity', 'Pro-social' and 'Anti-social' behaviour development from Year 1 to Year 5, controlling for background characteristics. These findings suggest that there are strong *reciprocal* relationships between 'Academic self-image' and academic progress and between 'Behavioural self-image' and social/behavioural development.
- Pupils' with a higher 'Behavioural self-image' at age 7 had all round better social/behavioural development and higher cognitive attainment and progress by Year 5 (age 10). This again points to the importance of links between academic and behavioural outcomes and the need to promote both.

'Enjoyment of school'
- Pupils' 'Enjoyment of school' was related to better social/behavioural development from Year 1 to Year 5. Children who had improved 'Pro-social' behaviour and 'Self-regulation' were more likely to enjoy going to school and were more interested in lessons. Pupils who enjoyed school also had greater reduction in 'Hyperactivity' and 'Anti-social' behaviour. However, there was a different relationship between 'Enjoyment of school' and cognitive progress; medium levels of 'Enjoyment of school' were linked slightly more strongly with higher progress in Reading and Mathematics than either high or low levels of 'Enjoyment of school'.

Relationships between Pupils' Views of primary school and progress
- After controlling for background characteristics, pupils' views of the 'Positive Social Environment' in school were also found to predict better cognitive progress and social/behavioural development from Year 1 to Year 5. This suggests that when a child feels safe and peers are viewed as friendly, both academic and social/behavioural outcomes benefit.

- Where the child perceives they get support for learning from their teachers, this predicts better child development in terms of 'Self-regulation' and 'Pro-social' behaviour. In addition, when a child perceives that the Headteacher is interested in children and is making sure that children behave, children have increased 'Pro-social' behaviour and reduced 'Hyperactivity' from Year 1 to Year 5.

The EPPE 3-11 Research: Background

The original EPPE study investigated children's intellectual and social/behavioural development between the ages of 3-7 years (Sylva et al., 2004). The EPPE 3-11 extension follows the sample to the end of primary school (age 11 years, the end of Key Stage 2). The EPPE technical reports and the website: www.ioe.ac.uk/projects/eppe provide further details about the study and the sample.

The EPPE research adopts an educational effectiveness design using mixed methods (Siraj-Blatchford et al., 2006) including multilevel modelling for the analyses of child outcomes and case studies of effective pre-school practice. Earlier reports have documented the enduring impact of pre-school and the importance of early family experiences (particularly the Early years home learning environment [HLE], see Melhuish et al., 2008) on children's later attainment and social/behavioural development up to age 10 in primary school. They also highlight the impact of the quality of the primary school a child attends, particularly in terms of its academic effectiveness independently measured using a contextualised value added approach (Sammons et al., 2007a; 2007b; Melhuish et al., 2006). In addition, during the pre-school phase the project explored the links between child outcomes and pre-school setting/classroom practices and processes through observations. This identified the features of pre-school experiences found to be linked with more positive developmental outcomes for young children up to age 5 years (see Sylva, 1999; Siraj-Blatchford, 2003; Sylva et al., 2006).

The analyses reported here explored: 1) the differences in pupils' self-perceptions and views of primary school in Year 5 related to child, family and home learning environment (HLE) characteristics; and 2) the relationships between pupils' self-perceptions, their views of primary school and variations in their cognitive and social/behavioural outcomes at Year 5. The findings here build on earlier analyses, which control for the child, parent and HLE variables already found to be significant predictors of children's outcomes in Year 5.

The cognitive outcome measures were collected using standardised tests[1] of Reading and Maths in Year 1 and 5. The social/behavioural measures were derived from teacher completed pupil profiles covering dimensions of 'Self-regulation', 'Pro-social' behaviour, 'Hyperactivity' and 'Anti-social' behaviour.

The self-perceptions ('*Enjoyment of school*', '*Anxiety and Isolation*', '*Academic self-image*' and '*Behavioural self-image*') and views of primary school ('*Teachers' support for pupils' learning*', '*Headteacher qualities*' and '*Positive Social Environment*') measures were derived from questionnaires in which children were asked about the views of themselves and their primary school. These questionnaires were collected in Year 2 and in Year 5. Statistical analysis (both exploratory and confirmatory factor analysis) of the Year 5 questionnaire items was conducted in a similar way to that in Year 2 and in both cases identified a number of underlying dimensions (factors) that show patterns of associations amongst the questionnaire items.

The first aim is to establish whether child, family and HLE characteristics, as well as features of the pre-school setting and primary school attended, help to explain differences in the self-perceptions and views of primary school among children in Year 5 (using multilevel models). The second aim is to explore whether pupils' self-perceptions and views of primary school help to predict cognitive and social/behavioural outcomes after controlling for a range of factors (child, family, HLE, prior attainment/developmental level), again using multilevel models. The research of the second aim focuses on measuring children's progress and development in cognitive and social/behavioural outcomes between Year 1 and Year 5. These analyses identify the unique (net) contribution of particular factors to variations in children's outcomes, while other background influences are controlled.

For further details on the research and analysis used in this study, see the full Research Reports (Sammons et al, 2008a, 2008b, 2008c).

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[1] NFER tests of Reading and Mathematics.

The findings

Differences in Pupils' Self-perceptions

Overall, the majority of children had positive self-perceptions while only a small minority had negative self-perceptions in Year 5. For example, about 60% of children reported that they liked going to school and they liked lessons for all or most of the time; 85% reported that they try to do their best in school and behave in class for all or most of the time; and 75% think they are good at school work and can cope with it. Nevertheless, 10% of the children reported that they feel lonely or worried for most or all of the time.

Pupil background influences

Gender
From all child, family and HLE background characteristics, gender had the most predictive associations with pupils' self-perceptions in Year 5. Results indicated that girls enjoyed school more in Year 5 (ES=0.19) and, in particular, tended to have a better 'Behavioural self-image' than boys (ES=0.53), but they also tended to feel more anxious and isolated than boys (ES=0.15). However, boys and girls did not have a significantly different 'Academic self-image' at this age.

Birth weight
Children who had a low birth weight tended to show higher scores for 'Anxiety and Isolation' in Year 5 (ES=0.29) and a similar trend was found for those with a record of early developmental problems (ES=0.16) during pre-school years.

SEN status
Children who had been identified as having a special educational need (SEN) during primary school had less favourable self-perceptions (ES from 0.16 to 0.33). This suggests that children identified for SEN tend to be more vulnerable in terms of their self-perceptions and may need more support for their socio-emotional development in addition to getting support for their cognitive development in primary school.

Family background
Free school meals (FSM)
Children eligible for Free School Meals (FSM, an indicator of low family income) showed significantly higher levels of 'Enjoyment of school' (ES=0.26). However, they had somewhat poorer 'Behavioural self-image' in Year 5 (ES=-0.11) although this latter effect is very small. This suggests that the influences of social disadvantage can vary for different self-perception outcomes (as well as for academic and social/behavioural outcomes analysed separately; see Sammons et al., 2007a; 2007b).

Parental qualifications
Fathers' qualification levels were related to pupils' self-perceptions. Children whose fathers have higher qualifications (18 academic, degree or higher degree) tended to have higher 'Academic self-image' than children whose fathers have no qualifications (ES from 0.19 to 0.27). By contrast, children whose fathers have vocational qualifications were found to have somewhat higher scores in terms of 'Anxiety and Isolation' (ES=0.23) than children whose fathers have no qualifications. In contrast, mother's qualification levels were not found to be related to pupils' self-perceptions in strong contrast to findings for cognitive outcomes.

The Home Learning Environment (HLE)
Early years HLE (based on home learning activities measured at age 3-4) continued to show a significant impact on pupils' 'Academic self-image' in Year 5. Those who had experience of a better Early years HLE also had higher levels of 'Academic Self-image' in Year 5 (ES from 0.18 to 0.24). This may operate either directly or indirectly via the impact of HLE on academic attainment and 'Self-regulation'.

Pre-school influences
Previous reports have shown that earlier educational experiences were significant predictors in shaping EPPE children's later cognitive and social/behavioural outcomes during Key Stage 2 (Sammons et al., 2007a; 2007b). Pre-school quality has a small but significant effect on children's later self-perceptions; children who attended high quality pre-schools showed higher levels of 'Behavioural self-image' (ES=0.13) and 'Enjoyment of school' (ES=0.18) in Year 5 than children who had attended low quality pre-school.

Primary school influences
Primary school academic effectiveness[2], measured as value added, did not have a significant impact on pupils' self-perceptions in Year 5, except for 'Behavioural self-image'. Children who attended academically high effective primary schools have somewhat more positive 'Behavioural self-image' (ES=0.13) in Year 5. This is in line with findings on children's social behaviour (based on teacher ratings) in Year 5.

[2] The value added analyses of the National Pupil Database were undertaken independently of the EPPE research for three full cohorts of pupils (2002 – 2004) from every primary school in England for English, Mathematics and Science to establish the academic effectiveness of each school (Melhuish et al., 2006).

Overall, the results reveal significant variation between primary schools in the self-perceptions of their pupils, especially for 'Enjoyment of school' and 'Academic self-image'. In some schools pupils report they enjoy school more and feel more positive about their 'Academic self-image' even when child, family and HLE background influences are taken into account.

Academic attainment in Year 2 (age 7)
There is a significant link between children's earlier academic attainment and their later self-perceptions. Controlling for background characteristics, earlier attainments in Reading and Mathematics measured at Year 2 were found to be a significant though fairly modest predictor of children's later 'Academic self-image', 'Behavioural self-image' and 'Anxiety and Isolation' in Year 5 (ES=0.17 for Mathematics and ES from 0.14 to 0.29 for Reading). Findings suggest that children with higher attainment in Year 2 were more likely to go on to have a higher 'Academic self-image' and 'Behavioural self-image' and lower levels of 'Anxiety and Isolation' in Year 5. The link between earlier academic attainment and 'Academic self-image' is further explored in a later section and the findings support the view that there is a strong reciprocal relationship between attainment and 'Academic self-image', a result that is in line with the wider literature on this topic (see Marsh, 2006).

Differences in Pupils' Views of Primary School
Overall, the majority of children view their primary school positively, with only a small minority giving very negative responses. For example, 81% of children report that their teacher tells them they can do well for all or most of the time, 85% of children think their headteacher is interested in children for all or most of the time, and 68% of children think there is not much bullying in their school. Children were found to be particularly positive about their headteacher in primary school, who was viewed as a person who is very much interested in children and makes sure everyone behaves in school.

Pupils with positive self-perceptions, particularly higher 'Enjoyment of school', also had positive views of their primary school. Children who enjoy school more are also likely to have favourable views of their teachers, headteachers and the social environment in school.

Results also showed that a certain amount of the variation in pupils' views of their primary school (13%) can be attributed to differences between schools, particularly for the 'Headteacher Qualities' and 'Positive Social Environment'

measures. This suggests there are significant differences between primary schools in the way children experience and perceive the behaviour of headteachers and in terms of the school's social environment.

Child and family characteristics
Child, family and HLE background characteristics were only weak predictors of children's views of primary school. Only a few background factors showed a significant relationship with pupils' views of primary school. Girls were somewhat more positive about their Headteachers (ES=0.13) and more positive about their social environment (ES=0.15) than boys. This is also in line with research on school and classroom climate elsewhere (Quek et al., 2002; Yates, 2001).

Children entitled to Free school meals (FSM) had somewhat more positive views of 'Teachers' support for pupils' learning' (ES=0.14). By contrast, children with higher family salaries were more likely to view their school as having a 'Positive Social Environment' (ES=0.34). In addition, children from the lowest Early years HLE group had less positive views of the social environment of their school than children with the highest Early years HLE (ES=-0.22).

Pre-school and primary school influences
Previously attending any pre-school compared to not attending ('home' children) was predictive of more positive views of social environment in primary school (ES=0.18). In addition, the quality of the pre-school was also important: children who had attended a high (ES=0.18) or medium quality pre-school (ES=0.20) had more positive views of their social environment in their primary schools than children who had not attended pre-school. However, the academic effectiveness of the primary school attended was not associated with the pupils' views of primary school.

Relationships between Pupils' Self-perceptions and their cognitive progress and social/behavioural development
The measures of 'Enjoyment of school', 'Academic self-image' and 'Behavioural self-image' were tested as predictors of children's outcomes and progress in other areas (cognitive and social/behavioural), controlling for child, family and HLE characteristics. Pupils' self-perceptions (particularly 'Academic self-image' and 'Behavioural self-image') were stronger predictors of their social/behavioural and cognitive outcomes in Year 5 than pupils' views of their primary school. The findings were similar for both attainment and progress up to Year 5.

'Academic self-image' & 'Behavioural self-image'
All pupils' self-perception factors were related to their outcomes, suggesting that having a higher 'Academic self-image' and/or 'Behavioural self-image' is associated with higher cognitive attainment and better social/behavioural outcomes, as well as positive progress in these outcomes from Year 1 to Year 5 (ES from 0.15 to 0.51 for cognitive progress and ES from 0.18 to 1.05 for social/behavioural development).

Pupils' 'Academic self-image' was the strongest predictor of cognitive progress (ES=0.38 for Reading and ES=0.51 for Mathematics) and improvement in 'Self-regulation' (ES=0.56). Pupils' 'Behavioural self-image' was the strongest predictor of increased 'Pro-social' behaviour (ES=0.68) and reduction in 'Hyperactivity' (ES=-1.05) and 'Anti-social' behaviour (ES=-0.48) from Year 1 to Year 5.

These findings are in line with other research on children's self-concept (Marsh, 2006) and suggest that a child's views of his or her own academic abilities are more likely to be related to his or her attainment and progress in Reading and Mathematics, as well as the teacher's ratings of the child's social behaviour in terms of 'Self-regulation'. Similarly, a child's own views of his or her behaviour are likely to be related to the teacher's ratings of 'Pro-social' behaviour, 'Hyperactivity' and 'Anti-social' behaviour (for similar findings see Haynes, 1990). *However, it is important to note that it is not possible to conclude that there is a causal effect of children's self-perceptions on their cognitive and social/behavioural outcomes in Year 5 or on progress in these outcomes from Year 1 to Year 5.* The findings only show that the relationship between 'Academic self-image' and cognitive outcomes and progress is strong and statistically significant, taking account of other background influences, which was expected since previous studies have consistently shown a strong *reciprocal* relationship between academic self-concept and academic achievement (Marsh, 1994; 2006; Marsh and Yeung, 1997). Children who attain well are likely to develop a high 'Academic self-image' and this may have a positive impact on motivation and encourage further effort and achievement. Similarly, there is likely to be a reciprocal relationship between 'Behavioural self-image' and social/behavioural outcomes and development (Sammons et al., 2008a).

When compared to the effect sizes of background characteristics, Early years HLE, pre-school and primary school influences on children's outcomes, the relationship between 'Academic self-image'

and cognitive progress from Year 1 to Year 5 is twice the size of the effect of pre-school quality on cognitive outcomes in Year 5, but is not as strong as the effect of Early years HLE and mother's highest qualification level on these outcomes. However, the relationship between 'Academic self-image' and development in 'Self-regulation' shows an effect that is as strong as the effect of Early years HLE on 'Self-regulation' in Year 5, which is the strongest predictor out of all background and school effects on this outcome.

The relationship between 'Behavioural self-image' and 'Hyperactivity', 'Pro-social' and 'Anti-social' behaviour development is stronger than the effect of gender, which is the strongest background predictor for these outcomes in Year 5. Note that these comparisons of background effects and the effects of self-perceptions should not be misunderstood for comparisons of different type of influences on children's outcomes since self-perceptions have *reciprocal relationships* with children's outcomes and progress in these outcomes.

'Enjoyment of school'
The factor 'Enjoyment of school' was positively related to improvement in social/behavioural development, indicating that children who enjoyed going to school and were interested in classes had improved 'Pro-social' behaviour (ES=0.37) and 'Self-regulation' (ES=0.34), but also reduced 'Hyperactivity' (ES=-0.42) and 'Anti-social' behaviour (ES=-0.16).

However, the relationship between 'Enjoyment of school' and cognitive progress was not linear. Medium levels of 'Enjoyment of school' were linked with improvement in Reading (ES=0.30) and Mathematics (ES=0.25) than either higher or lower levels of 'Enjoyment of school'. This finding shows that children who enjoyed school the most did not necessarily have the highest cognitive progress. Nevertheless, this relationship varies for different levels of 'Academic self-image'. The results show that low levels of 'Academic self-image' were related to the lowest Reading and Mathematics progress from Year 1 to Year 5 regardless of the level of 'Enjoyment of school'. However, for higher levels of 'Academic self-image', the 'Enjoyment of school' did matter: medium levels of 'Enjoyment of school' were related to the highest improvements in Reading (ES=0.51) and Mathematics (ES=0.64) from Year 1 to Year 5.

When compared to the effects of background factors on cognitive outcomes in Year 5, the effects of Early years HLE and mother's highest

level of qualifications is roughly twice as large as the strength of the relationship between medium levels of 'Enjoyment of school' and cognitive progress from Year 1 to Year 5. Again, note that these comparisons of background effects and the effects of self-perceptions should not be misunderstood for comparisons of different type of influences on children's outcomes and progress since self-perceptions have *reciprocal relationships* with children's outcomes and progress.

Self-perceptions at an earlier time point
In terms of self-perceptions measured at an earlier time point (at Year 2), pupils who had a higher 'Behavioural self-image' in Year 2 had all round better social/behavioural development (ES from 0.24 to 0.45) and higher cognitive attainment and progress by Year 5 (ES=0.16 for Reading and ES=0.15 for Mathematics). The associations of 'Behavioural self-image' with social/behavioural development are higher than with cognitive progress, which is in line with expectations since perceptions of pupils' own social behaviour are more likely to predict later social/behavioural outcomes and development than cognitive outcomes and progress.

Relationships between Pupils' Views of Primary School and their cognitive progress and social/behavioural development

'Positive Social Environment'
From the three factors of pupils' views of primary school ('Teachers' support for pupils' learning', 'Headteacher qualities' and 'Positive Social Environment') only perceived 'Positive Social Environment' was related to all children's outcomes in Year 5 and progress/development from Year 1 to Year 5 (ES=0.20 for Reading, ES=0.17 for Mathematics, ES=0.21 for 'Self-regulation', ES=0.30 for 'Pro-social' behaviour, ES=-0.41 for 'Hyperactivity' and ES=-0.21 for 'Anti-social' behaviour). This suggests that when a child feels safe and peers are viewed as friendly, both educational progress and social/behavioural development are likely to benefit.

'Teachers' support for pupils' learning'
Children's positive perceptions of 'Teachers' support for pupils' learning' were predictive of increased 'Self-regulation' (ES=0.25) and 'Pro-social' behaviour (ES=0.33). Attending a school where the child perceives they get support for learning from their teachers predicts better social behaviour development though not better academic progress.

'Headteacher qualities'
Positive perceptions of 'Headteacher qualities' were predictive of improved 'Pro-social' behaviour and reduced 'Hyperactivity' from Year 1 to Year 5. Where a child perceives that the Headteacher is interested in children and is making sure that children behave, children have improved 'Pro-social' behaviour (ES=0.16) and reduced 'Hyperactivity' (ES=-0.16).

When compared to the effects of background, HLE and pre-school and primary school influences on pupils' outcomes in Year 5, the effects of pupils' views of primary school are on par with the effects of attending a high quality pre-school for all outcomes, but are weaker than the most important background characteristics such as gender, Early years HLE or mother's highest qualification levels.

The results of these analyses of pupils' views of their learning environment broadly support the conclusion that the quality of pupils' experiences in terms of feeling safe and supported in schools provides measurable benefits in terms of children's all round development.

Conclusions and Implications
There is significant variation in children's self-perceptions at age 10 in terms of their 'Enjoyment of school', 'Academic self-image' and 'Behavioural self-image'. The two self-concept measures are strongly linked with academic and social/behavioural outcomes and progress/development in these outcomes. It is likely that children's views of themselves and their attainments and progress have a reciprocal relationship. Those who have greater outcomes and progress in Reading and Mathematics will be likely to develop a more favourable academic self-concept and vice versa. A similar pattern is evident for pupils' self-perceptions of their behaviour and measures of their behaviour in school rated by teachers. Possibly feedback processes (observations, teachers' comments, comparisons of self and peers) may mediate these relationships. In addition, supporting pupils in improving their attainment (by formative feedback, high quality teaching and appropriate learning experiences) is also likely to improve their 'Academic self-image' and 'Behavioural self-image' as well as benefiting their attainment and progress, creating a positive achievement spiral. Lack of such support to improve attainment, progress and behaviour, by contrast, may lead to a declining spiral because poor achievement or behaviour can reduce a child's self-image and thus increase the likelihood of reduced motivation and further decline.

In addition, there are differences in children's experiences of school that partly account for variations in their educational outcomes and progress. Those who perceive their schools more favourably in terms of 'Teachers' support for pupils' learning' have better social/behavioural development. Headteachers appear to play an important role too, in terms of the child's perceptions of their interest in pupils and their impact on the school's behavioural climate. Results suggest that encouraging greater pupil participation in school and enhancing these features of school culture may foster improved pupils' educational outcomes and progress and greater 'Enjoyment of school.' However, high levels of 'Enjoyment of school' on their own do not predict better attainment, progress or behaviour. Improving the school culture in terms of experiencing a 'Positive Social Environment' is also likely to promote better cognitive and developmental progress and overall outcomes.

The research results have implications for the Excellence and Enjoyment and the Every Child Matters agendas since they indicate that the affective, behavioural and academic domains are complementary and remain important for all round good child development. School policies and classroom practices that take steps to explore pupils' views and perceptions are more likely to encourage and promote the development of positive self-perceptions in children, and will be better placed to target support for more vulnerable groups.

Methodology

The EPPE 3-11 project contains a series of three 'nested' sets of analyses which help answer specific research questions.

The first set explores the research question about the academic effectiveness of the approximately 950 primary schools the EPPE 3-11 children attended. It used statistical data (matched KS1 and KS2 National assessment results) for successive pupil cohorts derived from every primary school in England (over three consecutive years 2002-2004) for English, Mathematics and Science to provide value added estimates of the academic effectiveness of each school and matched the resulting valued added measures to the EPPE child data set, to provide independent measures of the academic effectiveness of the school attended for each EPPE child (see Melhuish et al., 2006).

The second set of analyses involved the collection of information on academic and social/behavioural development, pupils' self-perceptions and views of primary school for every child in the sample. The sample of approximately 2700 pupils originated from 141 pre-school centres covering 6 types of provision (nursery classes, nursery schools, integrated settings, playgroups, private day nurseries and local authority day nurseries) and included a group of 'Home' pupils who had not attended pre-school.

The third analyses explored classroom practice in a sample of 125 Year 5 classes through two different but complementary classroom observations. This addresses questions concerning the variation in teachers and pupils behaviours and the impact of this on children's outcomes (see Sammons et al., 2006; 2008a).

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Additional Information

Table 1: Summary of key background factors and pre- and primary school influences on Pupils' self-perceptions and views of primary school in Year 5
(Only the largest significant effect sizes are reported)

		Enjoyment of school	Academic self-image	Behavioural self-image	Anxiety & Isolation	Teachers' support for pupils' learning	Head teacher qualities	Positive social environment
Key Child Factors (Largest significant effect size group)	Compared to							
Gender (Girls)	Boys	0.19		0.53	0.15		0.13	0.15
Birth weight (Low)	Normal				0.29			
Early Developmental problems (1-2 problems**)**	None				0.16			
Key Family factors								
Free school meals (FSM) (FSM)	Non-FSM	0.26		-0.11		0.14		
Family earned income (£67,500 +)	No earned income							0.34
Father's Qualification level (Vocational)	None				0.23			
Father's Qualification level (Higher Degree)	None		0.27					0.31
Home Learning Environment (HLE)								
Early years HLE (Low)	High		-0.24					-0.22
Pre-school								
Attending Pre-school	not attending							0.18
Pre-school quality								
ECERS-E (Medium)	not attending							0.20
ECERS-E (High)	Low	0.18		0.13				
Primary School Effectiveness								
English & Mathematics (High)	Low			0.13				

Table 2: Summary of the relationships between pupils' self-perceptions/views of primary school and their progress from Year 1 to Year 5

(Only the largest significant effect sizes are reported)

		Reading	Mathematics	'Self-regulation'	'Pro-social' behaviour	'Hyper activity'	'Anti-social' behaviour
Pupils' self-perceptions (Largest significant effect size group)	Compared to						
Enjoyment of School (Medium-Low)	Low		0.25	0.34			
Enjoyment of School (Medium-High)	Low	0.30					
Enjoyment of School (High)	Low				0.37	-0.42	-0.16
Academic Self-image (Medium-High)	Low	0.38	0.51			-0.44	-0.18
Academic Self-image (High)	Low			0.56	0.33		
Behavioural Self-image (Medium-High)	Low		0.15				
Behavioural Self-image (High)	Low	0.27		0.30	0.68	-1.05	-0.48
Pupils' views of primary school							
Teachers' support for pupils' learning (High)	Low			0.25	0.33		
Headteacher qualities (Medium)	Low					-0.16	
Headteacher qualities (High)	Low				0.16		
Positive Social Environment (Medium-Low)	Low		0.17	0.21			
Positive Social Environment (Medium-High)	Low						-0.21
Positive Social Environment (High)	Low	0.20			0.30	-0.41	