Effective Pre-School, Primary and Secondary Education Project (EPPSE 3-14)

# Students' Reports of Their Experiences of School in Year 9

Pam Sammons, Kathy Sylva, Edward Melhuish, Iram Siraj-Blatchford, Brenda Taggart, Rebecca Smees, Diana Draghici and Katalin Toth

# The EPPSE 3-14 Research Team

## Principal Investigators

**Professor Kathy Sylva**
Department of Educational Studies, University of Oxford
00 44 (0)1865 274 008 / email kathy.sylva@edstud.ox.ac.uk

**Professor Edward Melhuish**
Institute for the Study of Pupils, Families and Social Issues
Birkbeck University of London
00 44 (0)207 079 0834 / email e.melhuish@bbk.ac.uk

**Professor Pam Sammons**
Department of Educational Studies, University of Oxford
00 44 (0)1865 274 142/ email pamela.sammons@education.ox.ac.uk

**Professor Iram Siraj-Blatchford**
Institute of Education, University of London
00 44 (0)207 612 6218 / email i.siraj-blatchford@ioe.ac.uk

**\*Brenda Taggart**
Institute of Education, University of London
00 44 (0)207 612 6219 / email b.taggart@ioe.ac.uk

## Research Officers

**Dr Katalin Toth**
Institute of Education, University of London
00 44 (0)207 911 5587 / email k.toth@ioe.ac.uk

**Diana Draghici**
Institute of Education, University of London
00 44 (0)207 612 6608 / email d.draghici@ioe.ac.uk

**Dr Aziza Mayo**
Institute of Education, University of London
00 44 (0)207 331 5110 / email a.mayo@ioe.ac.uk

**Rebecca Smees**
Department of Education, University of Oxford
00 44 (0)1865 274 142 / email pamela.sammons@education.ox.ac.uk

**\*\*Wesley Welcomme**
Institute of Education, University of London
00 44 (0)207 612 6684 / email w.welcomme@ioe.ac.uk

*Also Research Co-ordinator
** Also Tracking Officer

# Authors

Pam Sammons

Kathy Sylva

Edward Melhuish

Iram Siraj-Blatchford

Brenda Taggart

Rebecca Smees

Diana Draghici

Katalin Toth

**The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education**

# Contents

**Executive Summary**

The EPPSE project investigates a number of different outcomes, both affective and developmental in the light of a growing interest in assessing the multi functional nature of schooling, such as promoting well being, social behaviour and positive attitudes or dispositions towards learning. This report focuses on the self-reports from students concerning their school experiences and classroom environment (which we term views or reports of school), and the development of robust measures (factors) of school processes and learning experiences that have been incorporated into further analyses of student outcomes. Reports on students' dispositions, academic and social-behavioural development at this age are published separately (Sammons et al. 2011a; Sammons et al. 2011b; Sammons et al. 2011c).

The original EPPE sample was recruited to the study at age 3 years plus and monitored to the end of Key Stage 3 (Year 9) in secondary school. An additional home sample of children (who had not attended a pre-school setting) was recruited when the pre-school sample started primary school. In addition to exploring pre-school influences, the EPPSE 3-14 research is designed to identify the influence of primary and secondary school on students' later educational outcomes and trajectories, as well as to investigate any continuing pre-school effects.

EPPSE 3-14 involves the collection and analysis of a wide range of quantitative data about students' development and its relation to child, family, home learning environment (HLE) characteristics and the characteristics of the pre-schools they attended. In addition 'value added' measures of primary school academic effectiveness[1] were added to the extensive data base along with the Department of Education's (DfE) Contexual Value Added (CVA) measure and the Office for Standards in Education (Ofsted) inspection judgements. These additional school measure enabled comparisons to be made with effectiveness and quality indictors collected during the pre-school and primary phases of the research. Thus it is possible to explore various features of pre-school, primary school and secondary influence on students' dispositions in Year 9.

The analyses reported here are based on one of two separate questionnaires administered to students at the end of Year 9 (age 14). The questionnaire asked about their experiences of school and classroom life (which we term views or reports of school). A similar questionnaire was administered when these students were they were in primary school in Year 5 (age 10)[2]. The questionnaire items were derived from existing measures and adapted for use with this age group. Other questions were been taken or adapted from The School Climate Assessment Instrument (Grosin and McNamara 2001) and from the Louisiana ABC+ model (Teddlie and Stringfield 1993).

As students views of school were collected from Year 5 analyses of both primary and secondary views of school have been possible (see Sammons et al 2008a, 2008b). A range of statistical methods has been used to investigate results for 1752 students, for whom a least one out of the eight experiences of school measures was available, representing 63% per cent of the students in the EPPSE 3-11 sample.

**Aims of the study of views of school in Year 9**

The aims of the analyses were to;

- examine students' questionnaire responses to identify and calculate underlying dimensions (factors) related to their experiences of school at the end of Key Stage 3 (KS3). T hese robust factors provide summary measures of important school and classroom processes.
- to explore students' responses to the questionnaire on their experiences of school in Year 9
- to explore students' experiences of school in Year 9 for different student groups (based on gender, FSM, parental qualifications, and early years Home Learning Environment)

---

[1] Derived from independent statistical analyses of national data sets conducted for all primary schools in England  see Melhuish et al 2006a

[2] A shorter questionnaire was administered in Year 2 that focused on Enjoyment of school and pupil dispositions

- to explore the combined impact of individual, parent and home learning (HLE) characteristics on students' experiences of school measures at the end of KS3;

In addition, the analyses describe the variation in students' experiences of school how these differ for particular student groups.

**Key findings**
Both individual items and factors from the *All about me at school* questionnaire were analysed.

***Measuring views of school in Year 9***
The analysis of the Year 9 *'All about me at school'* student questionnaire revealed eight underlying factors that relate to views of school, some overlapping with the outcomes derived from the pupil questionnaires administered in Year 5.

The first factor *Teacher support* relates to support given by teachers in terms of returning homework, feedback, praise, help and support. The second factor *School environment* looks at how students view aspects of the physical space, such as buildings and decorative state as well as its reputation. The third factor *Valuing students* relates to valuing and listening to students views, respecting students, and general levels of positive behaviour towards them by school staff. The fourth factor *Headteacher qualities* assesses how much the headteacher's presence is seen around school, their interest in students and how much they help students to behave. The fifth factor *Poor behaviour climate*, reflects the general student behaviour in terms of students being given a hard time by others if they work hard, level of compliance with school rules, fighting and weapons being brought into school, as well as whether students wish to leave as soon as they can, The sixth factor *Emphasis on learning* addresses how important students and teaching staff feel learning and academic achievement is, specifically in relation to doing well in exams, expectations to do their best, understanding and learning in lessons. The seventh factor *Teacher discipline* reflects the level of control in class in terms of behaviour, noise, rule breaking and student time keeping. Lastly, *Learning resources* measures reported levels of practical resources related to computers, science labs, and library facilities.

***Students' view on school in Year 9***
Individual question responses to the self report questionnaire were initially analysed. On the whole students were positive about their secondary school experience in KS3. Students were generally extremely positive about the 'emphasis on learning' and 'teacher support' in school but were less favourable in their views of the 'poor behaviour climate' and aspects of the 'school environment'[3]. We highlight some of the key findings below.

***The school environment:*** Four out of five students thought their school was a good school and nine out of ten thought the school was well organised. However, approximately a third of students did not feel that their school buildings were attractive or their classrooms were nicely decorated. The area where students were least positive was the condition of the school toilets. Nearly half of students felt that the toilets were not well cared for and clean.

***Learning resources:*** The quality of the libraries, the number of computers, science labs and the amount of textbooks were thought of as generally good. For example, nine out of ten students thought they had a good library. Three quarters of students believe that there were enough computers. However nearly one in five of students thought they had poor sports facilities.

Students were less positive about the amount of time given for computer work. A third of students thought they were not given enough time in lessons to work on computers.

---

[3] Items in the analysis of individual questions were grouped for reporting purposes under these headings. In some cases they included items not included in the final factors analysed later.

*Emphasis on learning:* The most positive responses related to the level of teacher care and their expectations for their students.  Nearly all students agreed that 'teachers always expect me to do my best', want them to understand something, not just memorise it, believe that mistakes are OK so long as they learn. Only a very small minority (less than one in ten students) felt that the teacher did not care whether they worked**.**

*Teacher support:* Nearly all students felt that the teachers told them how to make their work better and that their teacher would help them if they asked for help.

Students were slightly less positive about the level of 'teacher support' in other areas, although the majority of students still reported extremely favourable views.  Four out of five students agreed that they were given support in terms of help to feel confident about their work, received helpful comments, the teacher being available to talk to privately and received praise when they work hard.

However the one area where students were significantly less positive was the extent to which students offered them individualised work to do.  Only a quarter of students responded that they were sometimes given individualised work to do.

*Headteacher qualities:* Headteachers were rated very favourably overall particularly in relation to keeping good discipline and their level of interest in students.   Nine out of ten students felt that 'headteacher makes sure students behave well' and similar levels reported that their headteacher was 'interested in how much they learn'.  Fewer students reported that they saw the headteacher around school, where a quarter of students reported they did not often see the headteacher around the school.

*Valuing students:* Approximately three quarters of students reported that teachers in their school showed 'respect for all pupils'  and believed their school 'valued pupil views' and slightly less felt that 'teachers listen to what pupils say about the school'.  Most students reported that teachers were friendly to students and that they were consulted about school rules.

*Poor behaviour climate:* Students saw their own behaviour and that of other as good in some areas, with serious behaviours such as bullying and the carrying of weapons being rarely reported.  Nearly all students agreed that they did not bully others but one in ten students reported they were aware that students in their school carried weapons.  However approximately half of students thought 'pupils took no notice of school rules' and 'fights in and around school were common', with half of students reporting fights occurring 'often' in and around their school.

There were some negative reports of low level behaviour issues in the classroom with three quarters of students responding that 'other people's bad behaviour often makes it difficult to learn' and just over a fifth of students responding that they messed around in class.

*Teacher Discipline:* Overall students were positive about teacher discipline.  Over nine out of ten students believed that 'teachers make it clear how I should behave', that 'teachers take action when rules are broken', and that 'teachers make the aims of lessons clear[4]'.

Whilst the majority of students thought 'teachers make sure that it is quiet in lessons'  this still leaves nearly a third of students reporting that the teachers do not make sure that it is quiet during their lessons.

*Academic success:* Nearly all students believed that doing well in exams was important although over half felt that their school put too much emphasis on GCSE results.  Approximately a third of students indicated that students who worked hard were given a hard time by others and believed

---

[4] In the analyses this item loaded into this factor suggesting there is a strong link between the clarity of the aims of lessons and students' behaviour.

other students wanted to leave school as soon as they could Only one in ten students responded that the work was too hard for them.

### *Differences between pupil groups in views of school*
Gender, family poverty (measured by Free School Meals [FSM] entitlement), parents highest qualification level, and the early years home learning environment (HLE) were significant predictors of students' views of school.

#### *Gender*
Gender differences in students' views of school were found for a small number of items. Boys were significantly more positive than girls on only a few items and differences were small. These items were related to the sports facilities, returning homework, and taking notice of school rules, and fights in and around school. Girls were more positive in other areas. Substantial differences between girls and boys (girls more positive) were found for reporting teachers being unpleasant if they make mistakes, and bullying. Boys were also more likely to report messing around in class and that 'pupils who work hard are given a hard time by others'.

#### *Family poverty*
Students who were eligible for free school meals (FSM) were somewhat less favourable than other students in their views of secondary school for just under half of the items, although, many of these differences were relatively small. Larger differences were found for the following domains: 'poor behaviour climate', 'teacher support', 'learning resources' and academic emphasis[5], where students entitled to FSM had more negative views than other students.

The biggest differences were reported for items related to fights in and around school, teachers being available to speak to them privately and students wanting to leave school as soon as they could. For example, two thirds of students with higher levels of family poverty (eligible for FSM) reported fights in or around school compared to just under half of non-FSM students.

#### *Parental qualifications*
Parent's highest qualification levels[6] were found to be related to more positive student views of school. Items where the differences were particularly marked related primarily to the factors 'poor behaviour climate', 'teacher support', 'learning resources' and academic emphasis.

The items where the biggest differences were reported were 'most pupils want to leave this school as soon as they can', 'there are often fights (in or around school)', and 'most students take no notice of school rules'. For example, over half of students whose parents had no qualifications thought students wanted to leave school as soon as they could compared to a fifth students with parents who had the highest level of qualifications. Similarly, nearly two thirds of students whose parents had no qualifications reported fights often occurred in or around their school compared to a third of students with parents who had higher level qualifications.

#### *Early years home learning environment (HLE)*
Students who had experienced a more enriched early years HLE reported more positive views of school in Year 9 for many questionnaire items. They were much less likely to report 'poor behaviour climate' and poorer academic emphasis.

---

[5] **Academic emphasis** in this analysis does not constitute a separate factor but a number of items were grouped under this heading for reporting purposes. These items did not load on other factors used in the analyses.

[6] The highest parental qualification was taken and qualifications were combined to form three groups: No qualifications, School/vocational qualifications (16 Academic, 18 Academic and Vocational) and higher qualifications (degree, higher degree, other professional).

Students from low HLE groups reported higher levels of agreement with more negative aspects of their school experience.  Likewise, students who had experienced a more enriched early years HLE were more likely think their school had a good reputation, and were less likely to report that they bullied others.

**The combined impact of student, family and home characteristics on students' views of school**
The findings reported here are from the multilevel analysis of 'views of school' factors.

The analyses highlight the influence of a range of student, family and HLE factors that predict variation in students' views of school.  An analysis that contextualised student outcomes in terms of these factors was carried out.  The results show that individual student, family background and HLE factors have weaker relationships with students' views of school than with their academic outcomes in Year 9 (see Sammons et al 2011a), and some aspects of student's social behaviour (see Sammons et al 2011b).  These results are in accord with those found previously when the sample was in primary school (Year 5) and also for the concurrent analysis of student dispositions (Sammons et al 2011c).  The reduction in variance at both the school and student level was very small for most outcomes suggesting that background characteristics play only a small role in their views of school.

The multilevel analyses revealed significant variation between schools in the views of students and this was supported by an additional analysis of questionnaires returned from the peers of the EPPSE students.

*Pupil background*
Girls reported significantly more positive views than boys in terms of their 'emphasis on learning', although the effect was small. No other gender differences were found for other factors.

Students from different ethnic groups were compared to the majority ethnic group, White UK, to explore any significant differences in their views of school.  Most ethnic groups did not differ in their views from the White UK heritage group, but there were some statistically significant patterns;
- Pakistani heritage students tended to report more favourable views relating to 'valuing students'.
- Black Caribbean heritage students, on the whole, had less favourable views for 'valuing students', as did students from Mixed heritage groups.  Black Caribbean heritage students also less positive about the 'school environment'.
- Black African heritage group, on the whole, had more favourable views for 'emphasis on learning'.

Given the small numbers such ethnic differences should be treated with caution but the findings do suggest that ethnic minority students have slightly different experiences of school or views of themselves than the majority White UK group.

Students for whom English was an additional language (as measured in the early years) had significantly more favourable views of 'headteacher qualities', 'emphasis on learning', and 'teacher discipline' than non-EAL students.

Students who had been identified by their parents as having health problems in the early years (two or more problems) tended to report poorer views of 'teacher support'.

*Family background*
Poverty status was measured using the Free Schools Meals (FSM) entitlement measure in Year 9. Students entitled to FSM were found to have poorer views of the 'behaviour climate'[7] of their school than students not entitled to FSM.

---

[7] *Behaviour climate* throughout this document refers to the factor *Poor Behaviour climate*

The highest socio-economic level of either parent (family SES) was also tested, based on their occupation in KS1. Students from 'Skilled Non Manual', 'Skilled manual', 'Semi-skilled' and 'Unemployed' families had less favourable views of 'teacher discipline' and students from 'Skilled Non Manual', 'Semi-skilled' and 'Unemployed' families had less favourable views of 'valuing students' than students from a Professional Non manual household. Students from 'Semi-skilled' families had less favourable views of the 'behaviour climate' than students from a Professional Non manual household.

Employment status was also collected earlier in KS1 and mother's employment was found to be predictive of reports of 'teacher support', 'headteacher qualities', and 'teacher discipline'. Students who had mothers who were employed full time and studying (in KS1) were found to have less favourable views of 'teacher support' than students whose mothers were not working. Students who had mothers who were employed full time (whether studying or not) and 'other' employment status (in KS1) were found to have less favourable views of 'headteacher qualities' than students whose mothers were not working. Students who had mothers who were employed full time (in KS1) were found to have less favourable views of 'teacher discipline' than students whose mothers were not working. In addition, students whose mothers were self employed in the early years were found to have more favourable views of 'poor behaviour climate' than students whose mothers were not working.

The qualification level of both parents was also examined. Students of parents who had higher qualifications (degree, higher degree) were found to have more favourable views for 'poor behaviour climate than students with parents with no qualifications. Students with fathers with an academic qualification at 16 years were also more favourable about the 'poor behaviour climate. Students of fathers who had at least academic qualifications from aged 18 (18 academic, degree, higher degree) had a more positive view of the 'learning resources' in their school.

Students from families with the second to highest earned income band (£37,500-£66,000) measured earlier in KS2 were more likely to report poorer 'valuing students' and poorer 'school environment' scores than students from a family with no earned income.

The marital status of parents showed a small but significant effect. Compared to students living in married households in KS2, students from households where their parents were living together but not legally married reported less favourable views on 'valuing students' and less favourable views of the 'behaviour climate' of their school. In addition, compared to students living in married households in KS2, students from single parent households reported less favourable views of the 'school environment'.

*Home learning environment*
The student's early years HLE has not been found to be a significant predictor of views of school in Year 9. However, later Home Learning indicators showed a positive link to views of 'teacher support', 'teacher discipline' and 'school environment'. Students with high and medium levels of parent/child interaction in KS1 reported more positive views of 'teacher support' and 'teacher discipline' in Year 9 compared to those with low levels of parent/child interaction. In a separate analysis of dispositions in Year 9, students with high and medium levels of parent/child interaction in KS1 also reported higher 'popularity' levels. High levels of parent/child interaction and outings in KS1 were also found to be predictive of more positive views of the 'school environment'.

Students with high levels for the home learning indicator 'outings' showed more positive views of 'school environment' than students with low levels. Students with medium levels for the home learning indicator 'computer games' showed less positive views of 'teacher discipline' than students with low levels.

*Relationship to Special Educational Needs*

Students who have been identified as having a special need in Year 9 (SEN) also show a number of less favourable views of school. Students who are at the School Action plus stage of the SEN register report less favourable views for 'emphasis on learning', a poorer view of the 'behaviour climate' (higher scores on 'poor behaviour climate'), and less favourable views of the 'school environment'. In addition, students with a full statement report poorer views of the 'behaviour climate' (higher scores on 'poor behaviour climate'), and poorer 'learning resources'.

*Variation between schools*

The contextualised multilevel analyses show that there is large secondary school-level variance (Year 9) in students' views of school for some outcomes, when account is taken of intake differences. These findings are in contrast to the findings on student dispositions in Year 9, where only one outcome showed school level variation (Sammons et al 2011c). As the number of students per secondary school is low, an additional analysis was carried out on questionnaires returned from the peers of the EPPSE students[8]. This ensured that the number of students per school included in the analyses was much higher

Significant secondary school level variance was found for all factors related to 'views of school' in Year 9, and for some factors this was substantial. Particularly high variation between schools was found for factors that measured students' views of 'head teacher qualities', 'poor behaviour climate' and 'school environment'. It also pointed to significant variation in 'learning resources' and 'teacher support'[9].

---

[8] On average 25 'peer' students in the 67 schools in the analysis were available for the peer analysis of school level variation

[9] Peer data on views of school was also analysed and found similar school level variation to the EPPSE dataset.

# Introduction

This report presents the results of analyses related to students' experiences in Year 9 (age 14), with the purpose of creating measures of both school and classroom life as experiences by students.

These measures have used in the analysis of academic and social-behavioural outcomes as well as dispositions to investigate whether a student's reported experience of school can significantly predict outcomes in other areas.

The original EPPSE pre-school child sample (2,800) was recruited to the study at age 3 years plus. An additional 300 children who had not attended a pre-school setting (the 'home group) were recruited when the pre-school sample started primary school. The full sample (approximately 3,000 children) was then monitored to the end of Key Stage 1 (age 7, Year 2). The sample was followed again to the end of Key Stage 2 (age 11, Year 6). This third extension, the EPPSE 3-14 study has followed up the sample to the end of Key Stage 3 (age 14, Year 9). The longitudinal research design investigates the influence of primary and secondary school influences on students' educational outcomes in Year 9 (academic, social-behavioural and affective), as well as investigating any continuing pre-school effects.

As well as children's academic and social-behavioural outcome data, the EPPSE 3-14 study collected and analysed a wide range of information on individual child, family and home learning environment (HLE) characteristics, as well as information on the pre-schools the children attended.

Additional 'value added' measures of primary and secondary school academic effectiveness (derived from independent statistical analyses of national data sets) and selected indicators of school quality (measured by Ofsted inspection judgements) have been used in the analyses. These indicators about primary and secondary schools complement the measures collected earlier on the pre-school setting attended. The research therefore explores pre-school, primary and secondary school influences on students' outcomes in Year 9 both separately and jointly.

The *All about Me at School* student questionnaire was designed to explore individual students' views about school and classroom life (through self report) and was collected in both Year 5 and Year 9 (aged 10 and 14). A range of statistical methods have been used to investigate results for 1752 students.

## Aims

The aims of the analyses were to;
- examine students' questionnaire responses to identify and calculate underlying dimensions (factors) related to their experiences of school at the end of Key Stage 3 (KS3). These robust factors provide summary measures of important school and classroom processes.
- to explore students' responses to the questionnaire on their experiences of school in Year 9;
- to explore students' experiences of school in Year 9 for different student groups (based on gender, FSM, parental qualifications, and early years HLE);
- to explore the combined impact of individual, parent and HLE characteristics on students' experiences of school measures at the end of KS3.

In addition, the analyses describe the variation in students' experiences of school how these differ for particular student groups.

**Methods**

The findings reported rely on descriptive analyses and complex techniques such as exploratory and confirmatory factor analysis and multilevel analysis. The primary purpose of the analyses described here was the identification of measure of school and classroom experiences that could be investigated as predictors of other outcomes (academic, social-behavioural, dispositions). Principal components analysis was used to examine underlying dimensions in students' experiences of school. Confirmatory factor analysis was then conducted to create a more robust overall model of views of school in Year 9. In addition, multilevel models analysed the extent to which different individual background characteristics (including individual student, family, home learning) predict students' experiences of school in Year 9.

The paper focuses on the analysis of individual questions from the Year 9 *All about me in school* student questionnaire, administered at the end of Year 9, and eight measures (factors) derived from a selection of these questionnaire items. A similar questionnaire was administered to children at the end of Year 5 (Sammons et al 2008a).

Multilevel models provide accurate estimates of the impact of different individual or school characteristics on student outcomes (Goldstein 1995). They are used to explore institutional influences by partitioning variance into individual and higher levels (e.g. pre-school centre or primary or secondary school) reflecting clustering in the sample.

Background information about individual child, parent and family characteristics, was obtained initially through parent interviews conducted soon after children were recruited to the study. The parent interviews were designed to obtain information about a child's health and care history, details of family structure and parents' own educational and occupational backgrounds as well as some indications of parent-child activities. In most cases the parent interviews were conducted within 10 weeks of recruiting a child to the study and an excellent response rate (97%) was achieved. It should be noted that most interviews were with student's mothers and usually took place at the child's pre-school centre, although for some working parents telephone interviews were found to be more convenient.

Subsequently parents were asked to provide information via questionnaires about child, parent and family characteristics when the children were in Key Stage 1 of primary school (age approximately 6 years). Details were sought regarding any change in background information (in employment, income, family structure, number of siblings etc) as well as information on aspects of the HLE in Key Stage 1. The response rate obtained was 80.6 per cent[10]. Further information was collected by means of a parent questionnaire in Key Stage 2.

**Structure of the report**

This report is divided into five sections.

Section 1: gives details about the characteristics of the EPPSE 3-14 sample included in this analysis, compared to the overall sample and EPPSE sample at the start of primary school.

Section 2: describes how students answered selected individual questions on the Year 9 *All about Me at school* questionnaire related to their school experience, as well as significant differences between pupil groups in responses to individual questions.

Section 3: describes how the Year 9 students' measures of views of school were created using exploratory and confirmatory analysis of the self-report questionnaire items.

Section 4: investigates whether particular groups of students show differences in their experiences of school at the end of Year 9 that are predicted by their individual, family and HLE background characteristics and whether significant variation between schools in these measures exists.

Finally, Section 5 summarises the results drawing together the main findings and conclusions.

---

[10] Between the initial assessment at entry to pre-school and the Reception assessment 139 children dropped out of the study. The response rate is based on the corrected sample of 3032 children.

# Section 1: Characteristics of the sample at the end of Year 9

Of the original sample (n=3172) just over half (n= 1752, 55.3%) returned the *All about Me at school*[11] questionnaire. The research design used for the original pre-school phase of the EPPSE study is described in detail in EPPE Technical Paper 1 (Sylva et al. 1999). In summary, six English Local Authorities (LAs) in five regions participated in the research with children recruited from six main types of provision: nursery classes, playgroups, private day nurseries, Local Authority (LA) day care nurseries, nursery schools and integrated (combined) centres.

In order to enable comparison of centre and type of provision effects the project sought to recruit 500 children, 20 in each of 20-25 centres, from the various types of provision. In some LAs certain forms of provision were less common and others more typical. Within each LA, centres of each type were selected by stratified random sampling and, due to the small size of some centres in the project (i.e. rural playgroups) more of these centres were included than originally proposed, bringing the sample total to 141 centres.

In all 2,857 children in the pre-school were tracked to entry in reception at primary school. An additional sample of 314 'home' children (who had not attended a pre-school centre) was added at entry to primary school, for comparison with those who had attended pre-school, bringing the total sample to
3,172.

Once in primary school EPPSE children were asked their views about school life at two time points: Year 2 (age 6) and Year 5 (age 10)[12]. These students were then asked again at the end of Year 9 in secondary school. This section provides descriptive statistics for the sample at the end of Year 9 for whom questionnaire information had been obtained at age 14. Tables 1.1 to 1.2 provide a brief summary of the characteristics of the EPPSE 3-14 students at the end of Year 9 for whom at least one disposition factor score was available (n = 1752).

Table 1.1 provides a brief summary of the characteristics of the students compared to the full sample and those tracked to the start of primary school. In all there were slightly less students form ethnic minority heritage groups in this sample (21.7 per cent) compared to the overall sample and those tracked up to the beginning of primary school (26.9%) and the full sample (27.6%). The proportion having a different mother tongue than English was just under one in ten, in line but slightly lower than the full sample. With respect to family structure, 14.4 per cent of the students lived in large families (3 or more siblings) at entry to pre-school, somewhat higher than the full sample (9.7%). The main sample began with approximately one in ten children who had not attended any type of pre-school (the 'home' group) at the beginning of pre-school age. This is in line with the proportion found in this sample (just under one in ten).

---

[11] Of the original EPPSE sample recruited to the study (3172), 2798 were followed up to the end of KS3 in Year 9. The response rate to the Year 9 All about Me at School and All About Me at school surveys was 63% of this sample.
[12] The Year 2 questionnaire was much shorter than the year 5 or Year 9 questionnaires and did not include items specifically related to their experiences of the school and classroom environment, but included items related to more general enjoyment of school

**Table 1.1:** Selected background characteristics for the valid sample of Year 9 students included in the views of school analysis compared to the overall sample

| | EPPSE Views of school sample Year 9 (n=1752) | | EPPSE sample at start of primary school (n=2754) | | Full EPPSE sample (n=3172) | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| **Gender*:** | | | | | | |
| Male | 839 | 47.9 | 1584 | 51.6 | 1636 | 51.6 |
| Female | 913 | 52.1 | 1485 | 48.4 | 536 | 48.4 |
| **Ethnicity*:** | | | | | | |
| White UK Heritage | 1371 | 78.3 | 2242 | 73.1 | 2295 | 72.4 |
| White European Heritage | 57 | 3.3 | 112 | 3.7 | 122 | 3.8 |
| Black Caribbean Heritage | 43 | 2.5 | 111 | 3.6 | 116 | 3.7 |
| Black African Heritage | 25 | 1.4 | 63 | 2.1 | 66 | 2.1 |
| Black Other | 6 | 0.3 | 19 | 0.6 | 122 | 0.7 |
| Indian | 39 | 2.2 | 65 | 2.1 | 67 | 2.1 |
| Pakistani | 85 | 4.9 | 165 | 5.4 | 177 | 5.6 |
| Bangladeshi | 14 | 0.8 | 35 | 1.1 | 40 | 1.3 |
| Chinese | 2 | 0.1 | 5 | 0.2 | 5 | 0.2 |
| Other | 19 | 1.0 | 61 | 2.0 | 62 | 2.0 |
| Mixed Heritage | 89 | 5.1 | 187 | 6.1 | 192 | 6.1 |
| White Non European | 2 | 0.1 | 4 | 0.1 | 4 | 0.1 |
| **English as an additional language*** | 155 | 8.8 | 326 | 10.6 | 354 | 11.2 |
| **3 or more siblings *** | 242 | 14.4 | 308 | 9.5 | 308 | 9.7 |
| **Home Learning Environment Index*:** | | | | | | |
| 0-13 | 127 | 7.2 | 289 | 9.4 | 308 | 9.7 |
| 14-19 | 358 | 20.4 | 651 | 21.2 | 665 | 21.0 |
| 20-24 | 379 | 21.6 | 706 | 23.0 | 727 | 22.9 |
| 25-32 | 585 | 33.4 | 938 | 30.6 | 960 | 30.3 |
| 33-45 | 244 | 13.9 | 342 | 11.1 | 346 | 10.9 |
| Unknown | 59 | 3.4 | 143 | 4.7 | 166 | 5.2 |
| **Type of pre-school*:** | | | | | | |
| Nursery Class | 380 | 21.7 | 585 | 19.1 | 588 | 18.5 |
| Playgroup | 335 | 19.1 | 578 | 18.8 | 609 | 19.2 |
| Private Day Nursery | 362 | 20.7 | 501 | 16.3 | 516 | 16.3 |
| Local Authority | 208 | 11.9 | 415 | 13.5 | 433 | 13.7 |
| Nursery Schools | 251 | 14.3 | 504 | 16.4 | 519 | 16.4 |
| Integrated (Combined) | 65 | 3.7 | 171 | 5.6 | 192 | 6.1 |
| Home | 151 | 8.6 | 315 | 10.3 | 315 | 9.9 |

* Collected at entry to pre-school

Family background characteristics related to higher social class were also slightly over represented, as shown in Table 1.2. The sample returning questionnaires was found to be a slightly more advantaged group than the overall sample. For example there was a higher proportion of children who had attended private day nursery and students with parents from professional Non-manual social class.

**Table 1.2:** **Selected social class characteristics for the valid sample of Year 9 students included in the views of school analysis compared to the overall sample**

| | EPPSE Views of school sample Year 9 (n=1752) | | EPPSE sample at start of primary school (n=2754) | | Full EPPSE sample (n=3172) | |
|---|---|---|---|---|---|---|
| | % | n | % | n | % | % |
| **Social Class Mother *:** | | | | | | |
| Professional Non Manual | 99 | 5.7 | 122 | 4.0 | 126 | 4.0 |
| Other Profess. Non Man. | 403 | 23.0 | 595 | 19.4 | 605 | 19.1 |
| Skilled Non-Manual | 621 | 35.4 | 1026 | 33.4 | 1053 | 33.2 |
| Skilled Manual | 108 | 6.2 | 206 | 6.7 | 213 | 6.7 |
| Semi Skilled | 291 | 16.6 | 591 | 19.3 | 607 | 19.1 |
| Unskilled | 63 | 3.6 | 140 | 4.6 | 142 | 4.5 |
| Never Worked | 114 | 6.5 | 247 | 8.0 | 261 | 8.2 |
| Unknown | 53 | 3.0 | 142 | 4.6 | 165 | 5.2 |
| **Social Class Father *:** | | | | | | |
| Professional Non Manual | 177 | 10.1 | 237 | 7.7 | 242 | 7.6 |
| Other Profess. Non Man. | 379 | 21.6 | 556 | 18.1 | 569 | 17.9 |
| Skilled Non-Manual | 226 | 12.9 | 364 | 11.9 | 375 | 11.8 |
| Skilled Manual | 419 | 23.9 | 734 | 23.9 | 747 | 23.5 |
| Semi Skilled | 198 | 11.3 | 348 | 11.3 | 355 | 11.2 |
| Unskilled | 38 | 2.2 | 82 | 2.7 | 85 | 2.7 |
| Never Worked | 13 | 0.7 | 35 | 1.1 | 36 | 1.1 |
| Unknown | 302 | 17.2 | 713 | 23.2 | 763 | 24.1 |
| **Family Highest SES*:** | | | | | | |
| Professional Non Manual | 207 | 11.8 | 275 | 9.0 | 281 | 8.9 |
| Other Profess. Non Man. | 499 | 28.8 | 759 | 24.7 | 776 | 24.5 |
| Skilled Non-Manual | 557 | 31.8 | 946 | 30.8 | 974 | 30.7 |
| Skilled Manual | 228 | 13.0 | 444 | 14.5 | 452 | 14.2 |
| Semi Skilled | 176 | 10.0 | 391 | 12.7 | 406 | 12.8 |
| Unskilled | 25 | 1.4 | 76 | 2.5 | 79 | 2.5 |
| Never Worked | 31 | 1.8 | 84 | 2.7 | 88 | 2.8 |
| Unknown | 29 | 1.7 | 94 | 3.1 | 116 | 3.7 |

** Taken from first parent questionnaire*

In line with this, fewer students in receipt of FSM returned the all about me questionnaire (13.0% compared to 17.7% of the full sample), and there were less students with multiple disadvantage returning the questionnaire.

**Table 1.3:** Selected employment and disadvantage characteristics for the valid sample of Year 9 students included in the views of school analysis compared to the overall sample

| | EPPSE Views of school sample Year 9 (n=1752) | | | EPPSE sample at start of primary school (n=2754) | | Full EPPSE sample (n=3172) | |
|---|---|---|---|---|---|---|---|
| | **n** | **n** | **%** | **n** | **%** | **%** | |
| **Income indicator Year 9** | | | | | | | |
| Free school meals | 227 | 13.0 | 548 | 17.9 | 562 | 17.7 | |
| No Free school meals | 1451 | 82.8 | 2267 | 73.9 | 2314 | 73.0 | |
| Unknown | 74 | 4.2 | 254 | 8.3 | 292 | 9.3 | |
| **Employment status of mother during pre-school period*:** | | | | | | | |
| Not working | 765 | 43.7 | 1521 | 49.6 | 1572 | 49.6 | |
| Working part-time | 575 | 32.8 | 868 | 28.3 | 890 | 28.1 | |
| Working full-time | 292 | 16.7 | 456 | 14.9 | 463 | 14.6 | |
| Self-employed/combination part-time & self employed | 86 | 4.9 | 129 | 4.2 | 130 | 4.1 | |
| Unknown | 34 | 1.9 | 95 | 3.1 | 111 | 3.3 | |
| **Total Multiple disadvantage*:** | | | | | | | |
| 0 | 443 | 25.3 | 637 | 20.8 | 644 | 20.3 | |
| 1 | 502 | 28.7 | 761 | 24.8 | 781 | 24.6 | |
| 2 | 337 | 19.2 | 594 | 19.4 | 613 | 19.3 | |
| 3 | 166 | 9.5 | 379 | 12.3 | 391 | 12.3 | |
| 4 | 117 | 6.7 | 247 | 8.0 | 257 | 8.1 | |
| 5+ | 80 | 4.6 | 202 | 6.6 | 213 | 6.7 | |
| Unknown | 107 | 6.1 | 249 | 8.1 | 273 | 8.2 | |
| **Salary of family during KS1:** | | | | | | | |
| No salary | 274 | 15.6 | 589 | 18.5 | 569 | 17.9 | |
| £2500-15000 | 284 | 16.2 | 484 | 15.8 | 485 | 15.3 | |
| £17500-27500 | 294 | 16.8 | 411 | 13.4 | 411 | 13.0 | |
| £30000-35000 | 196 | 11.2 | 271 | 8.8 | 271 | 8.5 | |
| £37500-66000 | 345 | 19.7 | 470 | 15.3 | 470 | 14.8 | |
| £67500-132000+ | 140 | 8.0 | 173 | 5.6 | 173 | 5.5 | |
| Unknown | 219 | 12.5 | 691 | 22.5 | 793 | 25.0 | |
| **Salary of family during KS2:** | | | | | | | |
| No salary | 226 | 12.9 | 384 | 12.5 | 384 | 12.1 | |
| £2500-15000 | 276 | 15.8 | 415 | 13.5 | 415 | 13.1 | |
| £17500-27500 | 193 | 11.0 | 264 | 8.6 | 264 | 8.3 | |
| £30000-35000 | 193 | 11.0 | 254 | 8.3 | 254 | 8.6 | |
| £37500-66000 | 374 | 21.3 | 470 | 15.3 | 470 | 14.8 | |
| £67500-132000+ | 221 | 12.6 | 272 | 8.9 | 272 | 8.6 | |
| Unknown | 269 | 15.4 | 1010 | 32.9 | 1113 | 35.1 | |

*Taken from first parent questionnaire*

# Section 2: Students' views of school at the end of Year 9

The survey consisted of 78 questions under the following 14 headings:

**Box 2.1: Areas covered by the All about me in school questionnaire, Year 9**

| *All about me at school* questionnaire: sub-headings | | |
|---|---|---|
| 1) What my school is like | 6) Doing well | 11) How clear are my lessons |
| 2) My school's organisation | 7) Lessons | 12) Thinking back to when you first started |
| 3) My Headteacher | 8) My school's extra support | this school in Year 7 |
| 4) Being involved | 9) Home and school | 13) How teachers help me with my work |
| 5) Other pupils | 10) Me and my teachers | 14) Behaviour in school |

This section describes how the students responded to a selection of the items.

*The school environment*

The majority of students were positive about their school environment. Two thirds of students agreed or strongly agreed that the school had attractive buildings, the classrooms were nicely decorated and clean and thought people thought the school was a 'good school'. The condition of the toilets was more contentious with less than half of students believing they were 'well cared for and clean' (45% agree/strongly agree).

**Table 2.1: Students' views of the *School environment***

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **My school has attractive buildings** | 150 | **8.6** | 905 | **51.9** | 584 | **33.5** | 104 | **6.0** |
| **Classrooms are nicely decorated & clean** | 130 | **7.5** | 1026 | **59.1** | 518 | **29.8** | 62 | **3.6** |
| **Toilets are well cared for and clean** | 101 | **5.8** | 674 | **38.9** | 622 | **35.9** | 335 | **19.3** |
| **My school is well organised** | 296 | **17.0** | 1195 | **68.5** | 230 | **13.2** | 23 | **1.3** |
| **People think my school is a good school** | 384 | **22.1** | 990 | **57.0** | 299 | **17.2** | 63 | **3.6** |

*Learning resources*

In terms of school's learning resources the students were most positive about the library and science lab facilities, where approximately nine out of ten students agreed with these statements. Slightly less (80% agree/strongly agree) thought they had enough of computers and were happy with the sports facilities. Over a third of students felt that they did not get enough time on computer, and a quarter felt they did not have enough textbooks.

**Table 2.2: Students' views of *Learning resources***

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **There are enough computers** | 438 | **25.1** | 960 | **55.1** | 293 | **16.8** | 52 | **3.0** |
| **Science labs are good** | 415 | **23.9** | 1147 | **66.0** | 154 | **8.9** | 22 | **1.3** |
| **We have a good library** | 462 | **26.6** | 1101 | **63.3** | 144 | **8.3** | 32 | **1.8** |
| **We get enough time using computers in subject lessons** | 224 | **12.9** | 917 | **52.8** | 525 | **30.2** | 70 | **4.0** |
| | | | | | | | | |
| **We do not have enough textbooks** | 51 | **2.9** | 374 | **21.5** | 1022 | **58.7** | 293 | **16.8** |
| **Sports facilities are poor** | 61 | **3.5** | 228 | **13.1** | 912 | **52.5** | 537 | **30.9** |

*Poor behaviour climate*

Reports on behaviour in school were less positive. Nearly three quarters of students (72% agree/strongly agree) reported that other people's bad behaviour often made it difficult to learn. The area that was least positive in terms of reports on bad behaviour around the school. Approximately half of students (49% agree/strongly agree) thought that students took no notice of school rules and there often being fights. One in ten students reported the presence of weapons in school. Over a third of students felt that most pupils wanted to leave the school as soon as possible (39% agree/strongly agree) and felt that students were given a hard time if they worked hard (36% agree/strongly agree).

**Table 2.3 Students' views of *Behaviour climate***

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Most pupils want to leave this school as soon as they can** | 142 | **8.2** | 540 | **31.3** | 840 | **48.8** | 201 | **11.7** |
| **Pupils who work hard are given a hard time by others** | 120 | **6.9** | 506 | **29.3** | 926 | **53.6** | 177 | **10.2** |
| **Most pupils take no notice of school rules** | 119 | **7.0** | 719 | **42.3** | 753 | **44.3** | 107 | **6.3** |
| **There are often fights (in or around school)** | 135 | **8.0** | 693 | **40.9** | 718 | **42.4** | 149 | **8.8** |
| **Some kids bring knives or weapons into school** | 16 | **0.9** | 171 | **10.1** | 765 | **45.2** | 741 | **43.8** |
| | | | | | | | | |
| **Other people's bad behaviour often makes it difficult to learn** | 308 | **18.6** | 896 | **53.6** | 424 | **25.4** | 44 | **2.6** |
| **I mess about in lessons** | 25 | **1.5** | 350 | **20.8** | 1024 | **60.8** | 286 | **17.0** |
| **I never bully other pupils** | 818 | **47.8** | 765 | **44.7** | 78 | **4.6** | 50 | **2.9** |

*Headteacher qualities*

The headteacher was generally visible around school by most students (76% agree/strongly agree). Nine out of ten students thought the headteacher makes sure pupils behave well and slightly more thought they were interested in how much they learn (84% agree/strongly agree).

**Table 2.4: Students' views of *Headteacher qualities***

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **I often see the headteacher around the school** | 420 | **24.0** | 906 | **51.9** | 342 | **19.6** | 79 | **4.5** |
| **The headteacher makes sure pupils behave well** | 526 | **30.2** | 1040 | **59.7** | 145 | **8.3** | 31 | **1.8** |
| **The headteacher is interested in how much we learn** | 490 | **28.2** | 960 | **55.3** | 244 | **14.1** | 42 | **2.4** |

*Valuing students*
Students were generally positive about the role of the headteacher, especially in terms of their role in behaviour standards, with 90% of students agreeing that 'headteachers make sure pupils behave well'.

**Table 2.5: Students' views on the valuing of students**

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **The school values pupils' views** | 301 | **17.4** | 991 | **57.3** | 362 | **20.9** | 76 | **4.4** |
| **Teachers consult the pupils about school rules** | 351 | **20.2** | 1164 | **66.9** | 199 | **11.4** | 27 | **1.6** |
| **Teachers listen to what pupils say about the school** | 213 | **12.3** | 994 | **57.2** | 454 | **26.1** | 76 | **4.4** |
| **The teachers in this school show respect for all pupils** | 234 | **13.8** | 976 | **57.5** | 409 | **24.1** | 77 | **4.5** |
| **Teachers are unpleasant if I make mistakes** | 32 | **1.9** | 245 | **14.4** | 1126 | **66.4** | 293 | **17.3** |
| **Teachers are friendly towards me** | 301 | **17.8** | 1244 | **73.7** | 122 | **7.2** | 21 | **1.2** |

Consultation with students by teachers appears to be commonplace with nearly nine out of ten students agreeing that this takes place, although fewer students believed teachers listen to what they say about the school (70% agree/strongly agree), valued their views (74% agree/strongly agree) or showed them respect (71% agree/strongly agree). Most students (92% agree/strongly agree) felt teachers were friendly towards them.

*Emphasis on learning*
In line with findings from the students views of themselves on the importance of qualifications (Sammons et al 2011), nearly all students believed that 'most pupils want to do well in exams' (96% agree/strongly agree).

Students believed that teacher expectations were high, with nearly all students believing 'teachers always expect me to do my best' (96% agree or strongly agree with this statement). In terms of academic ethos, over half of students (55% agree/strongly agree) felt that the school put too much emphasis on GCSE results.

**Table 2.6: Students' views on the school's *Emphasis on learning***

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Most pupils want to do well in exams** | 529 | **30.3** | 1153 | **66.0** | 59 | **3.4** | 5 | **0.3** |
| **Teachers always expect me to do my best** | 570 | **32.7** | 1109 | **63.7** | 58 | **3.3** | 5 | **0.3** |
| **Lessons are usually 'challenging' but 'do-able'** | 186 | **10.7** | 1255 | **72.1** | 280 | **16.1** | 19 | **1.1** |
| **Most teachers want me to understand something, not just memorise it** | 428 | **24.6** | 1188 | **68.2** | 117 | **6.7** | 9 | **0.5** |
| **Most teachers believe that mistakes are OK so long as we learn** | 366 | **21.1** | 1213 | **69.8** | 139 | **8.0** | 19 | **1.1** |
| | | | | | | | | |
| **I always work hard in class** | 336 | **19.4** | 1200 | **69.2** | 193 | **11.1** | 5 | **0.3** |
| **My work is generally too hard for me** | 20 | **1.2** | 165 | **9.6** | 1334 | **77.7** | 198 | **11.5** |
| **During most lessons I know what I am supposed to learn** | 311 | **18.3** | 1245 | **73.1** | 134 | **7.9** | 14 | **0.8** |
| **The school puts too much emphasis on GCSE results** | 210 | **12.2** | 738 | **43.0** | 720 | **42.0** | 48 | **2.8** |

*Parental involvement*

Parental involvement appears to be commonplace. The majority of students report that their parents check that they have done their homework (74% agree/strongly agree), and have a good idea how they are getting on (94% agree/strongly agree). It was less common for teachers to check that parents had seen the homework, with nearly a third of students reporting that this did not occur.

**Table 2.7: Students' views related to parents involvement**

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **My parents check that I have done my homework** | 413 | **23.9** | 1046 | **60.5** | 232 | **13.4** | 39 | **2.3** |
| **Teachers check that my parents have seen my homework** | 389 | **22.5** | 775 | **44.7** | 463 | **26.7** | 105 | **6.1** |
| **I think my parents have a good idea about how I am getting on** | 527 | **30.4** | 1112 | **64.1** | 88 | **5.1** | 9 | **0.5** |

*Teacher support*

Aspects of teacher support related to help, positive feedback on work and availability of the teacher to talk to privately were reported on very favourably. For example, 95% of students felt that teachers would help them if they asked and nine out of ten students thought teachers told them how to make their work better. Students were less positive about rewarded for good behaviour and teachers returning homework promptly.

Just under a third of students reported teachers giving them differentiated work rather than the same as everyone else (31% agree/strongly agree).

**Table 2.8: Students' views on the level of *Teacher support***

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Most teachers mark and return my homework promptly** | 175 | **10.2** | 1050 | **61.4** | 419 | **24.5** | 65 | **3.8** |
| **Most teachers make helpful comments on my work** | 255 | **14.9** | 1188 | **69.6** | 233 | **13.7** | 30 | **1.8** |
| **Teachers praise me when I work hard** | 295 | **17.3** | 1125 | **65.9** | 256 | 15.0 | 32 | **1.9** |
| **Teachers tell me how to make my work better** | 306 | **17.9** | 1254 | **73.2** | 139 | **8.1** | 14 | **0.8** |
| **Teachers make me feel confident about my work** | 222 | **13.1** | 1080 | **63.6** | 368 | **21.7** | 27 | **1.6** |
| **I get rewarded for good behaviour** | 224 | **13.1** | 982 | **57.5** | 430 | **25.2** | 72 | **4.2** |
| **Teachers are available to talk to me privately** | 283 | **16.6** | 1141 | **66.8** | 260 | **15.2** | 24 | **1.4** |
| **Teachers will help me if I ask for help** | 412 | **24.1** | 1217 | **71.1** | 73 | **4.3** | 9 | **0.5** |
| | | | | | | | | |
| **Teachers sometimes give me my own work to do, not just everyone doing the same** | 43 | **2.5** | 431 | **25.1** | 992 | **57.8** | 250 | **14.6** |
| **Teachers make the aims of lessons clear** | 319 | **18.7** | 1207 | **70.6** | 176 | **10.3** | 7 | **0.4** |

*Teacher discipline*

In many aspects of teacher discipline and care teachers are reported to have high standards. Nine out of ten students feel teachers are clear about how they behave, take action when rules are broken and are bothered if they turn up late.

Although the majority of students (two thirds) feel the teacher makes sure the class is quiet during lessons this leaves a third who feel this is not the case. Only 9% of students feel their teacher does not care whether they work or not.

**Table 2.9: Students' views on the level of *Teacher discipline* and care**

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Teachers make sure that it is quiet during lessons** | 95 | **5.6** | 1019 | **60.5** | 533 | **31.7** | 37 | **2.2** |
| **Teachers take action when rules are broken** | 317 | **18.6** | 1226 | **72.0** | 141 | **8.3** | 19 | **1.1** |
| **Teachers are not bothered if pupils turn up late** | 23 | **1.3** | 164 | **9.6** | 1125 | **66.0** | 392 | **23.0** |
| **Teachers make clear how I should behave** | 269 | **15.8** | 1292 | **76.0** | 126 | **7.4** | 13 | **0.8** |
| | | | | | | | | |
| **Teachers are easily satisfied** | 59 | **3.5** | 534 | **31.5** | 980 | **57.8** | 122 | **7.2** |
| **Teachers don't seem to care whether I work or not** | 27 | **1.6** | 125 | **7.3** | 945 | **55.2** | 615 | **35.9** |

A minority of students did not feel safe in the playground (16%) and or on the journey to and from school (7%).

**Table 2.10: Students' views on safety in and out of school**

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **I always feel safe in the playground** | 353 | **20.8** | 1065 | **62.8** | 226 | **13.3** | 51 | **3.0** |
| **I feel safe on the way to/from school** | 557 | **32.7** | 1032 | **60.6** | 96 | **5.6** | 19 | **1.1** |

In terms of disruptions to the usual routine only one in ten students reported teachers did not arrive on time for lessons (11% agree/strongly agree). Nearly one in five reported frequent disruptions to the timetable and over half of students reported having 'a lot of supply teachers'.

**Table 2.11: Students' views on disruptions to the school routine**

| | Strongly agree | | Agree | | Disagree | | Strongly disagree | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Most teachers arrive on time for lessons** | 409 | **23.5** | 1145 | **65.7** | 177 | **10.2** | 11 | **0.6** |
| **We have lots of unexpected changes to our timetable** | 47 | **2.7** | 289 | **16.6** | 1065 | **61.3** | 336 | **19.3** |
| **We have a lot of supply teachers** | 153 | **8.8** | 776 | **44.6** | 725 | **41.7** | 85 | **4.9** |

*Differences between student groups in reported experiences of school*
Gender, family poverty (measured by Free School Meals entitlement), parental qualification level, and the early HLE experiences were significant predictors of students' views of school.

*Gender*
Gender differences in students' views of school were found for a small number of items. Boys were significantly more positive than girls on only a few items and differences were small. These items were related to the sports facilities, returning homework, and taking notice of school rules, and fights in and around school.

Substantial differences between girls and boys were found for reporting teachers being unpleasant if they make mistakes, and bullying. Boys were also more likely to report messing around in class and that 'pupils who work hard are given a hard time by others'. Smaller gender differences were discovered for further details on items see Appendix 1.

**Table 2.12: Key differences in views of school by gender**

|  | % Agreement | |
| --- | --- | --- |
| *Boys more positive than girls* | **Girls** | **Boys** |
| Most teachers mark and return my homework promptly | 68 | 75 |
| Most pupils take no notice of school rules | 52 | 46 |
| The sports facilities are poor | 17* | 16 |
| There are often fights (in or around school) | 50** | 47 |
| *Girls more positive than boys* |  |  |
| Teachers are unpleasant if I make mistakes | 12 | 21 |
| I never bully others | 54 | 41 |
| I mess about in lessons | 20 | 25 |
| Pupils who work hard are given a hard time by others | 34 | 39 |

* Boys were much more likely to disagree strongly (35%) than girls (28%)

** Girls were more likely to strongly agree (10%) than boys (6%)

**Family poverty**
Students who were eligible for free school meals (FSM) were somewhat less favourable than other students in their views of secondary school for just under half of the items, although, many of these differences were relatively small (see Appendix 1). Larger differences were found for the following domains: 'behaviour climate', 'teacher support', academic emphasis[13] and 'learning resources', where students entitled to FSM had more negative views than other students.

---

[13] **Academic emphasis** in this analysis does not constitute a separate factor but a number of items were grouped under this heading for reporting purposes. Additional items, which did not load onto a specific factor, were also grouped under existing headings e.g. 'there are not enough text books'.

**Table 2.13: Key differences in views of school by family poverty**

| | % Agreement | |
|---|---|---|
| | **Eligible for FSM** | **Not eligible for FSM** |
| *Poor behaviour climate* | | |
| There are often fights (in or around school) | 69 | 47 |
| Most pupils wanting to leave school as soon as they can | 58 | 37 |
| Pupils take no notice of school rules | 64 | 48 |
| Some kids bring knives or weapons into school | 24 | 9 |
| Pupils who work hard are given a hard time by others | 44 | 36 |
| *Teacher support* | | |
| Teachers are available to talk to me privately | 63 | 85 |
| My teachers are easily satisfied | 42 | 34 |
| *Academic emphasis* | | |
| My work is generally too hard for me | 21 | 9 |
| *Learning resources* | | |
| There are enough computers | 73 | 81 |
| There are enough textbooks | 34 | 23 |

The biggest differences were reported for items related to fights in and around school, teachers being available to speak to them privately and students wanting to leave school as soon as they could. For example, two thirds of students with higher levels of family poverty (eligible for FSM) reported fights in or around school (69% agreement) compared to just under half of non-FSM students (47% agreement).

These results point to some of the challenges facing students in disadvantaged communities and differences in the quality of their school experiences. These findings on students' views of the 'behaviour climate' in and around their school are disturbing, but are relevant given current concerns about civil unrest largely involving young people in disadvantaged neighbourhoods.

**Parental qualifications**
Parent's highest qualification levels[14] were found to be related to more positive student views of school. Items where the differences were particularly marked are shown in Table 3.15 and related primarily to the factors as students with higher levels of family poverty, i.e. 'poor behaviour climate', 'teacher support', academic emphasis and 'learning resources'.

The items where the biggest differences were reported were 'most pupils want to leave this school as soon as they can', 'there are often fights (in or around school)', and 'most students take no notice of school rules'. For example, over half of students whose parents had no qualifications thought students wanted to leave school as soon as they could (55% agreement) compared to a fifth students with parents who had the highest level of qualifications (20% agreement). Similarly, nearly two thirds of students whose parents had no qualifications reported fights often occurred in or around their school (63% agreement) compared to a third of students with parents who had higher level qualifications (33% agreement). Smaller differences were found for other items (see Appendix 1).

---

[14] The highest parental qualification was taken and qualifications were combined to form three groups: No qualifications, School/vocational qualifications (16 Academic, 18 Academic and Vocational) and higher qualifications (degree, higher degree, other professional).

**Table 2.14: Differences in views of school by family qualification level (higher/positive)**

| | % Agreement | | |
|---|---|---|---|
| | **No qualifications*** | **School level / vocational qualifications \*\*** | **Higher qualifications\*\*\*** |
| **Poor behaviour climate** | | | |
| Most pupils want to leave this school as soon as they can | 55 | 46 | 20 |
| There are often fights (in or around school) | 63 | 54 | 33 |
| Most pupils take no notice of school rules | 62 | 52 | 37 |
| Some kids bring knives or weapons into school | 21 | 11 | 6 |
| Pupils who work hard are given a hard time by others | 47 | 39 | 25 |
| **Teacher support** | | | |
| Teachers are easily satisfied | 49 | 34 | 30 |
| Teachers are unpleasant if I make mistakes | 25 | 16 | 12 |
| **Academic emphasis** | | | |
| The work is generally too hard for me | 17 | 11 | 6 |
| *Learning resources* | | | |
| We have a lot of supply teachers | 58 | 57 | 43 |
| There are not enough textbooks | 30 | 27 | 18 |
| There often changes to the timetable | 26 | 21 | 14 |
| The sports facilities are poor | 24 | 17 | 13 |
| **School environment** | | | |
| This school is a good school | 72 | 77 | 86 |

\* No Qualifications     \*\* School/vocational qualifications     \*\*\* Degree, higher degree, professional

There were a small number of items where students whose parents had lower or no qualifications were more positive about their school than the other students. The most marked differences in views are shown in Table 2.15**Error! Bookmark not defined.** and relate to the level of student consultation and rewarding good behaviour (see Appendix 1 for details of smaller differences).

**Table 2.15: Differences in views of school by family qualification level (lower/positive)**

| | % Agreement | | |
|---|---|---|---|
| | **No qualifications \*** | **School level / vocational qualifications \*\*** | **Higher qualifications\*\* \*** |
| Teachers consult pupils about school rules | 94 | 88 | 82 |
| Teachers rewarded good behaviour | 79 | 71 | 68 |

\* No Qualifications     \*\* School/vocational qualifications     \*\*\* Degree, higher degree, professional

### *Early years Home Learning Environment (HLE)*

During the pre-school phase of the study the early years HLE was investigated. An HLE index was compiled to give some indication of the extent of learning opportunities available in different households. The HLE groups were as follows:

| Lowest HLE Score of 0 – 13 | 14 – 19 | 20 – 24 | 25 - 32 | Highest HLE Score of 33 - 45 |
|---|---|---|---|---|

Students who had experienced a more enriched early years HLE reported more positive views of school in Year 9 for many questionnaire items. The most marked differences are shown in Table 2.16. Students who had experienced a more enriched early years HLE were much less likely to report poor behaviour climate and poorer academic emphasis.

**Table 2.16: Differences in students' views of school by HLE groups: negative aspects of school**

|  | % Agreement | | | | |
|---|---|---|---|---|---|
|  | Lowest HLE 0 – 13 | 14 – 19 | 20 – 24 | 25 – 32 | Highest HLE 33 – 45 |
| **Poor behaviour climate** | | | | | |
| Most pupils want to leave this school as soon as they can | 56 | 48 | 43 | 35 | 27 |
| There are often fights (in or around school) | 68 | 57 | 48 | 43 | 39 |
| Most pupils take no notice of school rules | 64 | 55 | 50 | 44 | 41 |
| Pupils who work hard are given a hard time by others | 46 | 42 | 39 | 32 | 27 |
| **Academic emphasis** | | | | | |
| The work is generally too hard for me | 22 | 12 | 10 | 9 | 5 |
| **Teacher support** | | | | | |
| Teachers are unpleasant if pupils make mistakes | 24 | 18 | 18 | 15 | 8 |

Table shows that students from low HLE groups reported higher levels of agreement with more negative aspects of their school experience. Moreover, there are also differences in relation to positive aspects of schooling where again the low HLE group have less positive views of school (see Table 2.17 below). Students who had experienced a more enriched early years HLE were more likely think their school had a good reputation, and were less likely to report that they bullied others.

**Table 2.17: Differences in students' views of school by HLE groups: positive aspects of school**

|  | % Agreement | | | | |
|---|---|---|---|---|---|
|  | Lowest HLE 0 – 13 | 14 – 19 | 20 – 24 | 25 – 32 | Highest HLE 33 – 45 |
| People think my school is a good school | 72 | 74 | 78 | 81 | 84 |
|  | % Strong agreement | | | | |
| I never bully other pupils | 39 | 45 | 43 | 51 | 57 |

Some of these differences may reflect different educational opportunities or choices made by families of high HLE students. Elsewhere our analyses showed the net positive impact of HLE on later outcomes after control for other family factors such as parental qualifications, family income and SES. Therefore, a more enriched early years HLE may have direct benefits for some outcomes but may also pick up differences in the value placed on education and support for schooling.

There were small differences for a number of other items, see Appendix 1.

### *Summary of students' views of school in Year 9*

Most EPPSE students in Year 9 were satisfied about their experience of secondary school. In particular, students were very positive about the following areas:
- teachers always expect me to do my best (97% agreement);
- most pupils want to do well in exams (96% agreement);
- teachers will help me if I ask for help (95% agreement);
- most teachers want me to understand something, not just memorise it (93% agreement);
- teachers make clear how I should behave (92% agreement);
- teachers don't seem to care whether I work or not (91% disagreement);
- teachers tell me how to make my work better (91% agreement);
- teachers take action when rules are broken (91% agreement);
- the headteacher makes sure pupils behave well (90% agreement).

Areas where students were less positive were the amount of time allowed to work on computers, the condition of the toilets and the level of perceived respect for students. A large minority reported high levels of fights in school, noise in class and sizeable proportion of students reported the behaviour of others in class made it difficult to learn. Although students generally wanted to do well in exams, a large minority felt that the school placed too much emphasis on GCSE exam results.

Areas that came up as having the least positive response were:
- other people's bad behaviour often makes it difficult to learn (72% agreement);
- toilets are well cared for & clean (55% thought they were not well cared for and clean);
- most pupils take no notice of school rules (49% agreement);
- there are often fights (in or around school) (49% reported fights occurring often);
- most pupils want to leave this school as soon as they can (39% agreement);
- pupils who worked hard are given a hard time by others (36% agreement).

The general condition of the classrooms and attractiveness of the buildings was also thought of as less favourable by students, with approximately a third of students giving negative responses to these areas.

Differences between student groups were common for student of differing socio-economic status (SES) and parental qualifications and gender differences were found for a smaller number of items.

# Section 3: Students' experiences of school and data analysis

*The factor structure for views of school*

Box one below shows the eight factor structure that was created using exploratory and confirmatory factor analyses. The Confirmatory Factor Analysis model fit is shown in Table 3.1.

**Table 3.1: Confirmatory Factor Analysis of Views of school for the main EPPSE student dataset**

| Description | Chi-square | df | Chi/df | AIC | RMR | TLI | RMSEA | GFI | AGFI | CFI | PCFI | Pupil n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **2398.3** | **674** | **3.558** | **2612.3** | **0.017** | **0.90** | **0.042** | **0.92** | **0.90** | **0.91** | **0.82** | **1465** |

\* Listwise deletion

**Box 3.1: The specific items associated with each students' views of school in Year 9 (age 13)**

| Views of school factors in Year 9 | | | |
|---|---|---|---|
| ***Teacher support*** | ***School environment*** | ***Valuing students*** | ***Headteacher qualities*** |
| Most teachers mark & return my homework promptly | My school has attractive buildings | The school values students' views | I often see the headteacher around the school |
| Most teachers make helpful comments on my work | Classrooms are nicely decorated & clean | Teachers listen to what students say about the school | The headteacher makes sure students behave well |
| Teachers praise me when I work hard | Toilets are well cared for & clean | The teachers in this school show respect for all students | The headteacher is interested in how much we learn |
| Teachers tell me how to make my work better | My school is well organised | Teachers are unpleasant if I make mistakes | |
| Teachers make me feel confident about my work | People think my school is a good school | Teachers are friendly towards me | |
| Teachers are available to talk to me privately | | | |
| Teachers will help me if I ask for help | | | |
| I get rewarded for good behaviour | | | |
| ***Cronbach=0.86*** | ***Cronbach=0.75*** | ***Cronbach=0.78*** | ***Cronbach=0.72*** |
| ***Poor Behaviour climate*** | ***Emphasis on learning*** | ***Teacher discipline*** | ***Learning resources*** |
| Most students want to leave this school as soon as they can | Most students want to do well in exams | Teachers make sure that it is quiet during lessons | There are enough computers |
| Students who work hard are given a hard time by others | Teachers expect me to do my best | Teachers make clear how I should behave | Science labs are good |
| Most students take no notice of school rules | The lessons are usually 'challenging' but 'do-able' | Teachers take action when rules are broken | We have a good library |
| There are often fights (in or around school) | Most teachers want me to understand something, not just memorise it | Teachers are not bothered if students turn up late | We get enough time using computers in subject lessons |
| Some kids bring knives or weapons into school | Most teachers believe that mistakes are OK so long as we learn | | |
| ***Cronbach=0.72*** | ***Cronbach=0.68*** | ***Cronbach=0.62*** | ***Cronbach=0.70*** |

In terms of average factor scores, students were most positive about 'emphasis on learning' and 'headteacher qualities' and least positive for 'school environment' and 'valuing students' (see Table 3.2).

**Table 3.2: Descriptive statistics for the experiences of school factors at the end of Year 9**

|  | Mean | Standard deviation | Range | Pupil n |
|---|---|---|---|---|
| *Teacher support* | **2.97** | 0.43 | 1-4 | 1721 |
| *School environment* | **2.79** | 0.50 | 1-4 | 1750 |
| *Valuing students* | **2.89** | 0.50 | 1-4 | 1751 |
| *Headteacher qualities* | **3.10** | 0.59 | 1-4 | 1747 |
| *Poor behaviour climate* | **2.30** | 0.52 | 1-4 | 1750 |
| *Emphasis on learning* | **3.17** | 0.38 | 1.2-4 | 1748 |
| *Teacher discipline* | **3.01** | 0.39 | 1-4 | 1717 |
| *Learning resources* | **3.03** | 0.45 | 1-4 | 1750 |

Some of the factors are strongly related, as can be seen from correlations that are displayed in Table 3.3. The highest correlation was found for 'teacher support' and 'valuing students' (0.69), and lowest for 'headteacher qualities' and 'poor behaviour climate' (-0.19).

**Table 3.3: Correlation between the experiences of school factors**

|  | School environment | Valuing students | Headteacher qualities | Poor behaviour climate | Emphasis on learning | Teacher discipline | Learning resources |
|---|---|---|---|---|---|---|---|
| *Teacher support* | 0.51** | 0.69** | 0.40** | -0.34** | 0.58** | 0.53** | 0.46** |
| *School environment* |  | 0.57** | 0.36** | -0.50** | 0.38** | 0.41** | 0.54** |
| *Valuing students* |  |  | 0.41** | -0.43** | 0.51** | 0.49** | 0.48** |
| *Headteacher qualities* |  |  |  | -0.19** | 0.38** | 0.35** | 0.31** |
| *Poor behaviour climate* |  |  |  |  | -0.28** | -0.28** | -0.37** |
| *Emphasis on learning* |  |  |  |  |  | 0.44** | 0.41** |
| *Teacher discipline* |  |  |  |  |  |  | 0.34** |

** Statistically significant at p<0.01

The correlations between views of school and dispositions are shown in Table 3.4. The strongest relationships between the views of school and dispositions are found for 'enjoyment of school', particularly for the factors 'teacher support', 'emphasis on learning' and 'valuing students'.

**Table 3.4: Correlations between experiences of school and dispositions in Year 9**

|  | Maths Academic Self concept | English Academic Self concept | Anxiety | Citizenship values | Popularity | Enjoyment of school |
|---|---|---|---|---|---|---|
| *Teacher support* | 0.20** | 0.21** | -0.13** | 0.29** | 0.17** | 0.53** |
| *School environment* | 0.13** | 0.12** | -0.18** | 0.17** | 0.11** | 0.45** |
| *Valuing students* | 0.17** | 0.14** | -0.17** | 0.30** | 0.08** | 0.52** |
| *Headteacher qualities* | 0.08** | 0.14** | -0.07** | 0.23** | 0.11** | 0.33** |
| *Poor behaviour climate* | -0.15** | -0.07** | 0.29** | -0.10** | -0.09** | -0.43** |
| *Emphasis on learning* | 0.19** | 0.22** | -0.11** | 0.30** | 0.18** | 0.50** |
| *Teacher discipline* | 0.08** | 0.10** | -0.10** | 0.27** | 0.07** | 0.37** |
| *Learning resources* | 0.12** | 0.19** | -0.15** | 0.19** | 0.05 | 0.39** |

* Statistically significant at p<0.05  ** Statistically significant at p<0.01  all other correlations not significant

The following background measures have been used in the multilevel models as potential predictors of different aspects of views of school;

- Individual student factors (e.g. gender, birth weight, mother tongue and ethnicity).
- Family factors (e.g. socio-economic status [SES], parents' qualification level, family earned income, marital status).
- Early years Home Learning Environment (HLE) index during the pre-school years and later home learning measures from primary school.

Contextualised multilevel analyses are used to investigate whether the patterns of association between outcomes and these individual, family and HLE factors remain statistically significant when students reach the end of Year 9 of secondary school. These analyses are used to identify and quantify the unique (net) contribution of particular characteristics to variation in student views of school outcomes, while other influences are controlled. The nature and strength of such background influences have been explored individually and in total, because they are relevant to issues of equity and social inclusion.

### Multilevel model estimates for Year 9 views of school outcomes

Substantial secondary school level variance was found for some factors related to 'views of school' in Year 9 both before and after background characteristics were accounted for. Particularly high 'raw' variation between schools (not accounting for background characteristics[15]) was found for factors that measured students' views of 'head teacher qualities' (14.5%), 'poor behaviour climate' (27.5%) and 'school environment' (27.6%). See Table 3.5.

Analyses also pointed to significant variation in 'learning resources' and 'teacher support'. These results indicate that there are marked differences across the secondary schools attended by EPPSE students in their experiences of these features of their KS3 educational experiences.

**Table 3.5: Model details for the null models of factors measuring students' views of secondary school**

|  | Teacher support | School environ-ment | Valuing students | Head-teacher qualities | Poor behaviour climate | Emphasis on learning | Teacher discipline | Learning resources |
|---|---|---|---|---|---|---|---|---|
| **Student level variance (se)** | 0.934 | 0.741 | 0.934 | 0.767 | 0.738 | 0.906 | 0.920 | 0.871 |
| **School level variance (se)** | 0.047 | 0.282 | 0.047 | 0.130 | 0.280 | 0.058 | 0.044 | 0.105 |
| **Intra-school correlation** | 0.048 | 0.276 | 0.048 | 0.145 | 0.275 | 0.060 | 0.046 | 0.107 |
| **No of students** | 1721 | 1750 | 1751 | 1747 | 1750 | 1748 | 1717 | 1750 |
| **No of schools** | 514 | 514 | 522 | 521 | 522 | 521 | 521 | 521 |

The least variation between schools was found for 'teacher discipline' (4.6%), 'valuing students' (4.8%) and 'teacher support' (4.8%). moderate variation was found for 'emphasis on learning' (6.0%) and 'learning resources' (10.7%). See table 3.5 for details.

Analysis of peer data, where the number of students per school was much higher (making school-level variation more reliable), found significant school level variation for all outcomes. In line with the EPPSE student data very high variation was found for 'school environment', 'headteacher qualities' and 'poor behaviour climate' (see appendix 3 for details).

---

[15] Termed the 'null' model.

After background characteristics were accounted for in the multilevel analyses (contextualised models) substantial school level variation still existed for students' views of 'head teacher qualities' (13.7%), 'poor behaviour climate' (15.7%) and 'school environment' (23.8%). In line with the null models, moderate variation was found for 'teacher support' (4.5%), 'emphasis on learning' (5.7%) and 'learning resources' (7.4%). See table 3.6 for details.

**Table 3.6: Model details for the contextualised models of factors measuring students' views of secondary school**

|  | Teacher support | School environ-ment | Valuing students | Head-teacher qualities | Poor behaviour climate | Emphasis on learning | Teacher discipline | Learning resources |
|---|---|---|---|---|---|---|---|---|
| **Student level variance (se)** | 0.928 | 0.745 | 0.915 | 0.762 | 0.707 | 0.895 | 0.913 | 0.873 |
| **School level variance (se)** | 0.044 | 0.232 | 0.037 | 0.121 | 0.132 | 0.054 | 0.030 | 0.070 |
| **Intra-school correlation** | 0.045 | 0.238 | 0.039 | 0.137 | 0.157 | 0.057 | 0.032ns | 0.074 |
| **Reduction in total variance** | 5.6% | 14.0% | 18.8% | 5.9% | 42.8% | 4.8% | 29.7% | 30.9% |
| **Reduction in student variance** | 0.7% | 1.0%incr | 2.1% | 5.4% | 4.1% | 1.3% | 7.8% | 0.2%incr |
| **Reduction in school variance** | 6.6% | 18.5% | 16.2% | 7.2% | 52.8% | 6.2% | 31.4% | 33.2% |
| **No of students** | 1721 | 1750 | 1751 | 1747 | 1750 | 1748 | 1717 | 1750 |
| **No of schools** | 514 | 514 | 522 | 521 | 522 | 521 | 521 | 521 |

Incr   Increase in variance

# Section 4: Links between individual, family and Home Learning characteristics and students' experiences of school in Year 9

**Estimating the impact of student background**

A number of student, family and home learning variables were found to be predictive of students' views of school when tested in combination, and can be seen in Tables 4.1-4.8 below. Contextualised multilevel analyses were carried out, taking the views of school factors as outcomes, to investigate the combined impact of student background on views of school. It is likely that different indicators of student background are inter-related, e.g. family poverty and parental qualifications. Multilevel analysis enables the influence of the different variables to analysed together, so for example, the influence of gender can be estimated after taking account of other student background characteristics. The full models are shown in Appendix 2.

Background did not predict views of school to the same extent as is found for other outcomes, especially academic and social-behavioural outcomes. The largest number of background effects were found for views of 'poor behaviour climate' and 'teacher discipline'. Student and family characteristics accounted for the most school variation for 'poor behaviour climate', 'teacher discipline' and 'learning resources', although still by only a relatively amount. This suggests that, although views of school are predicted to a small extent by student characteristics, the influence is small.

*Individual, family and Home Learning influences on 'teacher support'*

Student background did not predict 'teacher support' to any great extent. However, having multiple health problems in the early years moderately predicted a poorer view of the level of 'teacher support' (ES=-0.20), as did having a mother who was working full time and studying whilst they were in KS1 (ES=-0.49). Higher levels of parent-child interaction in KS1 was associated with higher levels of 'teacher support' (High ES=0.34, Medium=0.16). This could be a reflection of the student's ability to interact with adults.

**Table 4.1: Significant measures for the contextualised analysis** *Teacher Support*

| Teacher support | | |
|---|---|---|
| *Variable* | *Effect size* | *Description* |
| **Health problems in early years** | -0.20 | Students with 2 or more health problems (early years) had less positive views of *Teacher support* compared to those who had none |
| **Mother's employment in KS1** | -0.49 | Students with mothers working full time and studying have less positive views of *Teacher support* than mothers that are unemployed |
| **Parent-Child interaction in KS1** | 0.34 0.16 | Students with high & medium levels of P-C interaction have more positive views of *Teacher support* (compared to low) |
| **Reduction in student level variance** **Reduction in school level variance** | 0.7% 5.6% | |

*Individual, family and Home Learning influences on 'school environment'*

A number of different pupil groups were found to have a poorer view of the 'school environment'. The students with the least positive views were students of Black Caribbean heritage (ES=-0.44), students with a Special Educational Need (School Action Plus, ES=-0.45), and students from single parent households who had moderately poorer view of the 'school environment' (ES=-0.27).

Moderately more positive views of the 'school environment' were associated with students who experience high levels of parent-child interaction and outings in their early primary school years (ES=0.26;0.34). These differences, related to mainly physical aspects of the school environment maybe in part be due to real differences in 'school environment' experienced by students with differing levels of disadvantage.

**Table 4.2: Significant measures for the contextualised analysis of Year 9 *School environment***

| | | *School environment* |
|---|---|---|
| *Variable* | *Effect size* | *Description* |
| **Ethnicity** | -0.44 | Students of Black Caribbean heritage have less positive views of the *School environment* than White UK students |
| **Special Educational Needs** | -0.45 | Students on the School Action Plus stage of the SEN register have less positive views of the *School environment* than students not on the SEN register |
| **Family salary in KS2** | -0.19 | Students with a family salary of £37,500-£66,000 have less positive views of the *School environment* than students with no family salary |
| **Marital status in KS2** | -0.27 | Students from a single parent household have less positive views of the *School environment* than students from married households |
| **Parent-Child interaction in KS1** | 0.26 | Students with high levels of P-C interaction have more positive views of *School environment* (compared to low) |
| **Outings in KS1** | 0.34 | Students with high levels of outings have more positive views of *School environment* (compared to low) |
| **Reduction in student level variance** **Reduction in school level variance** | | 1.0% increase in variance 14.0% |

*Individual, family and Home Learning influences on Valuing students*

Students of Black Caribbean were much less likely to feel their school 'valued students' (compared to White UK; ES=-0.62) as did mixed heritage students, but to a much lesser extent (ES=-0.24). In contrast, Pakistani heritage were moderately more likely to feel their school 'valued students' (ES=0.38). Lower SES was also associated with less positive views of the school on this aspect.

**Table 4.3: Significant measures for the contextualised analysis of Year 9 *Valuing students***

| | | *Valuing students* |
|---|---|---|
| *Variable* | *Effect size* | *Description* |
| **Ethnicity** | -0.62 -0.24 0.38 | Students of Black Caribbean heritage and Mixed Race heritage have less positive views of the *Valuing students* than White UK heritage students Students of Pakistani heritage have more positive views of the *Valuing students* than White UK heritage students |
| **Highest family SES in KS2** | -0.26 -0.27 -0.37 | Students of families whose highest SES was Skilled Non-manual Semi-skilled and Unemployed have less positive views of *Valuing students* than students where highest SES was Professional non-manual |
| **Family salary in KS2** | -0.20 | Students with a family salary of £37,500-£66,000 have less positive views of the *Valuing students* than students with no family salary |
| **Marital status in KS2** | -0.25 | Students from 'living with partner' households have less positive views of the *Valuing students* than students from married households |
| **Reduction in student level variance** **Reduction in school level variance** | | 2.1% 18.8% |

*Individual, family and Home Learning influences on Headteacher qualities*
Very few background factors were found to relate to students views of their headteacher. Students who had English was an additional language in the early years were found to be moderately more positive about their headteacher (ES=0.32). Interestingly, students who had mothers who were working full time and 'other' employment (in KS1) had less favourable views of their headteacher.

**Table 4.4: Significant measures for the contextualised analysis of Year 9 *Headteacher qualities***

| Headteacher qualities | | |
|---|---|---|
| *Variable* | *Effect size* | *Description* |
| **English as an Additional Language in the early years** | 0.32 | Students with EAL had more positive views of *Headteacher qualities* than non-EAL students |
| **Mother's employment in KS1** | -0.40<br>-0.15<br>-0.40 | Students with mothers with 'other' employment<br>Full time and<br>Full time and studying have less positive views of *Headteacher qualities* than mothers that are unemployed |
| **Reduction in student level variance**<br>**Reduction in school level variance** | 5.4%<br>5.9% | |

*Individual, family and Home Learning influences on Behaviour climate*
Of all the views of school more student background differences were found for 'poor behaviour climate' than any of the other outcomes. Students with a Special need (School Action Plus or full statement) were particularly more likely to feel the behaviour in their school was poor (ES=0.74, 0.74), as were students entitled to FSM (ES=0.30). Students with parents educated to a higher level were particularly more likely to have a more positive view of the behaviour climate of their school, as did students with parents with high SES. This is likely to relate to real differences between schools.

**Table 4.5: Significant measures for the contextualised analysis of Yr 9 *Poor Behaviour climate***

| Poor behaviour climate | | |
|---|---|---|
| *Variable* | *Effect size* | *Description* |
| **Special Educational Needs** | 0.74<br>0.74 | Students on the School Action Plus stage of the SEN register and<br>Statemented have less positive views of the *Behaviour climate* than students not on the SEN register |
| **Mother's qualifications** | -0.33<br>-0.59 | Students with mothers who hold a degree or<br>Higher degree had more positive view of the *Behaviour climate* than students with mothers with no qualifications |
| **Father's qualifications** | -0.33<br>-0.45<br>-0.46<br><br>-0.22 | Students with fathers who hold an age 16 academic qualification,<br>Degree or<br>Higher degree had more positive view of the *Behaviour climate* than students with fathers with no qualifications<br>Students with absent fathers had more positive view of the *Behaviour climate* than students with fathers with no qualifications |
| **Mothers employment status in the early years** | -0.31 | Students with mothers who were self employed in the early years had a more positive view of the *Behaviour climate* than students with mothers with no qualifications |
| **Highest family SES in KS2** | 0.34 | Students of families whose highest SES was Semi-skilled have less positive views of *behaviour climate* than students where highest SES was Professional non-manual |
| **Marital status in KS2** | 0.25 | Students from 'living with partner' households have less positive views of the *behaviour climate* than students from married households |
| **FSM status in Year 9** | 0.30 | Students entitled to FSM were less positive about the *behaviour climate* |
| **Reduction in student level variance**<br>**Reduction in school level variance** | 4.1%<br>42.8% | |

*Individual, family and Home Learning influences on Emphasis on learning*
Although girls had a slightly better view of the 'emphasis on learning' in their school than boys, the difference was small (ES=0.10). Other student groups that had more positive views were students of Black African heritage (compared to white UK; ES=0.64), and students for whom English was an Additional language when they entered pre-school (ES=0.34). Students with SEN (school action plus) had poorer views of the 'emphasis on learning' in their school (ES=-0.38).

**Table 4.6: Significant measures for the contextualised analysis of Year 9 *Emphasis on learning***

| *Emphasis on learning* | | |
|---|---|---|
| *Variable* | Effect size | Description |
| **Gender** | 0.10 | Girls had more positive views related to *Emphasis on learning* than boys |
| **Ethnicity** | 0.64 | Students of Black African heritage have more positive views of the *Emphasis on learning* than White UK students |
| **English as an Additional Language in the early years** | 0.34 | Students with EAL had more positive views of *Emphasis on learning* than non-EAL students |
| **Special Educational Needs** | -0.38 | Students on the School Action Plus stage of the SEN register have less positive views of the *Emphasis on learning* than students not on the register |
| **Reduction in student level variance** | | 1.3% |
| **Reduction in school level variance** | | 4.8% |

*Individual, family and Home Learning influences on Teacher discipline*
Lower SES was associated with poorer views of 'teacher discipline' in the school. Students who had a more positive view of 'teacher discipline' were students for whom English was an Additional language when they entered pre-school (ES=0.23) as did students who had experience higher levels of parent-child interaction during KS1 (high ES=0.33; medium ES=0.18). 'Medium' levels of computer gaming (compared to low) were related to less favourable views of 'teacher discipline'.

**Table 4.7: Significant measures for the contextualised analysis of Year 9 *Teacher discipline***

| *Teacher discipline* | | |
|---|---|---|
| *Variable* | Effect size | Description |
| **English as an Additional Language in the early years** | 0.23 | Students with EAL had more positive views of *Teacher Discipline* than non-EAL students |
| **Mother's employment in KS1** | -0.19 | Students with mothers working full time have less positive views of *Teacher Discipline* than mothers that are unemployed |
| **Father's employment in KS1** | 0.45 | Students with fathers working part time have more positive views of *Teacher Discipline* than fathers that are unemployed |
| **Highest family SES in KS2** | -0.23 -0.22 -0.30 -0.29 | Students of families whose highest SES was Skilled Non-manual Skilled manual Semi-skilled and Unemployed have less positive views of *Teacher Discipline* than students where highest SES was Professional non-manual |
| **Parent-Child interaction in KS1** | 0.33 0.18 | Students with high and Medium levels of P-C interaction have more positive views of *Teacher Discipline* (compared to low) |
| **Computer games in KS1** | -0.18 | Students with medium levels of computer gaming have less positive views of *Teacher Discipline* (compared to low) |
| **Reduction in student level variance** | | 7.8% |
| **Reduction in school level variance** | | 29.7% |

*Student and family influences on Learning resources*
Very few background factors were found to significantly predict views of the 'learning resources'. Students with a SEN (school action plus) had poorer views of the level of their school's 'learning resources' (ES=-0.54). In addition, students with fathers with higher academic qualifications were more likely to feel the school had better 'learning resources' (18 academic ES=0.28; Degree ES=0.33; Higher degree ES=0.58).

**Table 4.8: Significant measures for the contextualised analysis of Year 9 *Learning resources***

| *Learning resources* | | |
|---|---|---|
| *Variable* | **Effect size** | **Description** |
| **Special Educational Needs** | -0.54 | Students who are statemented on the SEN register have less positive views of the *Learning resources* than students not on the register |
| **Father's qualifications** | 0.28 0.33 0.58 | Students with fathers who hold a aged 18 academic qualification, Degree or Higher degree had more positive view of the *Learning resources* than students with fathers with no qualifications |
| **Reduction in student level variance** | | 0.2% increase in variance |
| **Reduction in school level variance** | | 30.9% |

*Consistent individual background influences*
Students with SEN have been found to have less positive dispositions (Sammons et al 2011c) and are also shown here to be less positive about many aspects of the school and classroom ('school environment', 'poor behaviour climate', 'emphasis on learning' and 'learning resources'). Students of Black Caribbean heritage were also found to be less positive about the school environment and how much students are valued.

Students who were classified as having English as an additional Language were found to be more positive than other students for three views of school measures; 'headteacher qualities', 'emphasis on learning' and 'teacher discipline'.

**Table 4.9: Significant pupil background measures for the contextualised analysis**

| | Pupil background influences | | | |
|---|---|---|---|---|
| | **Ethnicity** | **Health problems** | **Special Educational Needs** | **English as an Additional Language** |
| *Teacher support* | | Small | | |
| *School environment* | Moderate | | Moderate | |
| *Valuing students* | Large | | | |
| *Headteacher qualities* | | | | Small |
| *Behaviour climate* | | | Large | |
| *Emphasis on learning* | Large | | Small | Small |
| *Teacher discipline* | | | | Small |
| *Learning resources* | | | Moderate | |

Small Effect size <0.20-0.39999 Moderate 0.40-0.59999 Large 0.60+

*Consistent family background influences*

Many aspects of Socio-Economic Status (SES) predicted students' views of school. Mothers who worked full time (in KS1) were found to be less positive than students with unemployed for 'teacher discipline' and 'headteacher qualities'. Student classified from families with lower SES reported less favourable 'teacher discipline', 'behaviour climate' and 'valuing students'.

**Table 4.10: Significant family background measures for the contextualised analysis**

|  | Family background influences | | | | | |
|---|---|---|---|---|---|---|
|  | Qualifications* | Employment** | FSM | Salary | Socio-Economic Status | Marital status |
| *Teacher support* |  | Moderate |  |  |  |  |
| *School environment* |  |  |  |  |  | Moderate |
| *Valuing students* |  |  |  | Small | Small | Small |
| *Headteacher qualities* |  | Moderate |  |  |  |  |
| *Behaviour climate* | Moderate | Small | Small |  | Small | Small |
| *Emphasis on learning* |  |  |  |  |  |  |
| *Teacher discipline* |  | Moderate |  |  | Small |  |
| *Learning resources* |  |  |  |  |  |  |

Small Effect size <0.20-0.39999 Moderate 0.40-0.59999 Large 0.60+

\* Mother's or father's qualifications   \*\* Employment of mother of father

*Consistent Home Learning influences*

Students that had higher levels of earlier parent-child interaction had more favourable views of school for 'teacher support', 'school environment' and 'teacher discipline'.

## Section 5: Summary and conclusions

Most EPPSE students in Year 9 were satisfied about their experience of secondary school. In particular, students reported very positive responses to question items related to 'teacher support', 'teacher discipline' and the head. However students did highlight that, although teachers took steps to keep order and discipline, student behaviour in classroom and around school was still an issue.

Areas that stood out as less positive for students were fights in school, noise in class and other people's behaviour making it difficult to learn. In addition, although students generally wanted to do well in exams, a large minority still felt that the school placed too much emphasis on GCSE exam results.

The findings here support academic, social-behavioural and dispositions findings reported elsewhere (Sammons et al 2011a, 2011b, 2011c) of important links between features of secondary school experience as reported by students and their academic and behavioural outcomes as well as their dispositions to school. For example, some of the strongest predictors of student dispositions relate to their views and experiences of key features of secondary school and classroom processes. In particular, the 'emphasis on learning', 'teacher support', and lower scores on 'poor behaviour climate' predict more favourable dispositions as well as better academic attainment and social-behavioural outcomes. This suggests that schools should be encouraged to value students' views and take steps to collect information about their perspectives on a regular basis. Such information can provide an important source of evidence for school improvement and development planning given the substantial differences between schools in key areas as reported by students (in particular; 'school environment', 'headteacher qualities' and 'poor behavioural climate', and to a lesser extent; 'learning resources', 'emphasis on learning' and 'teacher support'). There is also evidence of important variation between schools in students' dispositions for 'enjoyment of school'.

Taken together, the findings suggest that secondary schools do differ significantly in various ways that are likely to influence the quality of learning and well-being as perceived by students. Such evidence could provide valuable feedback to schools, especially where they maybe struggling to improve or are rated as inadequate by inspectors.

There were also some significant differences between student groups identified in their answers to specific questions on the questionnaire. The most notable differences between students in their views of school were found for those students who were more disadvantaged in terms of poorer backgrounds (measured by FSM entitlement) and those whose parents had lower levels of qualifications. These students tended to have less favourable views. These differences were most pronounced for items concerning 'behaviour climate', but also for some aspects of 'teacher support', 'learning resources' and academic emphasis. Students who had experienced lower levels of HLE in the early years were also less positive on a smaller number of items, related primarily to 'poor behaviour climate.

It is likely that students eligible for FSM or with parents who have no qualifications were more likely to attend schools in more disadvantaged areas (often those deemed to be in challenging circumstances). These results suggest that such students have less favourable experiences of many features of their secondary school experience, especially the behaviour climate, although they were not less likely to report that they enjoyed school. These differences may exacerbate existing inequalities in achievement and reduce the chances of educational success as students move through secondary school.

Through contextualised multilevel analysis the combined impact of student, family and HLE characteristics was also investigated. As with dispositions, background accounted for much less variation in views of school than academic or social-behavioural outcomes. Background accounted for the greatest amount of variation in measures (which we could interpret as intake differences) for 'behaviour climate', 'teacher discipline' and 'learning resources'.

Students with Special Educational Needs in particular were generally less positive about school and classroom ('school environment', 'poor behaviour climate', 'emphasis on learning' and 'learning resources') as well as for dispositions (Sammons et al 2011c). This maybe a reflection of real differences between schools on these measures or genuinely more negative views of schooling held by this student group.

# Appendix 1: Differences between pupil groups in their views of school

## Smaller differences between student groups
Girls were found to be significantly more positive (but with small differences) on the following items:
**Table A1.i: Differences in views of school related to gender**

| | % Agreement | |
|---|---|---|
| | **Girls** | *Boys* |
| I always work hard in class | 89 | 88 |
| Most teachers want me to understand something, not just memorise it | 94 | 91 |
| Teachers will help me if I ask for help | 96 | 94 |

The following were found to be significant, but with smaller differences:
**Table A1.ii: Differences in views of school related to family poverty**

| | % Agreement | |
|---|---|---|
| | **Entitled to FSM** | **Not entitled to FSM** |
| Teachers don't seem to care whether I work or not | 15 | 8 |
| Teachers make sure it is quiet in class | 60 | 66 |
| The Sports facilities are poor | 25 | 15 |
| The Science labs are good | 82 | 91 |
| We have lots of unexpected changes to our timetable | 28 | 18 |
| We have a lot of supply teachers | 59 | 53 |
| Pupils think this is a good school | 70 | 80 |
| The teachers are friendly | 85 | 92 |
| Teachers make me feel confident about my work | 75 | 77 |
| I am bored in lessons | 49 | 40 |
| Teachers consult pupils about school rules | 92 | 87 |
| Lessons are usually 'challenging' but 'do-able | 75 | 84 |
| The teacher makes the aims of the lesson clear | 87 | 90 |
| I like most of the lessons | 78 | 85 |
| I always feel safe in the playground | 77 | 84 |
| I feel safe to/from school | 87 | 94 |
| I always work hard in class | 89 | 84 |
| Teachers will help me if I ask for help | 90 | 96 |

The following were found to be significant, but with smaller differences:

**Table A1.iii: Differences in views of school related to family qualifications**

|  | % Agreement | | |
| --- | --- | --- | --- |
|  | **Lowest Qualifications** | Middle qualifications | **Highest Qualifications** |
| Most pupils want to do well in exams | 94 | 96 | 97 |
| The buildings are attractive | 59 | 59 | 65 |
| The school has a good library | 87 | 90 | 90 |
| This school is well organised | 85 | 85 | 88 |
| We often see the headteacher around the school | 78 | 77 | 74 |
| Teachers arrive on time for school | 87 | 88 | 92 |
| I am often bored in class | 44 | 44 | 35 |
| Teachers check homework has been seen by parents | 77 | 67 | 63 |
| I get rewards for good behaviour | 79 | 70 | 67 |
| Teachers don't seem to care whether I work or not | 11 | 10 | 5 |
| Most teachers make helpful comments on my work | 83 | 84 | 86 |
| Teachers praise me when I work hard | 87 | 83 | 82 |
| We have enough computers | 78 | 78 | 85 |
| Teachers make sure that it is quiet during lessons | 61 | 65 | 69 |
| Teachers are not bothered if pupils turn up late | 15 | 11 | 9 |
| I always feel safe in the playground | 81 | 82 | 87 |
| Most teachers believe that mistakes are OK so long as we learn | 88 | 91 | 93 |
| Teachers make clear how I should behave | 92 | 91 | 94 |
| The Science labs are good | 87 | 89 | 92 |

The following were found to be significant, but with smaller differences:

**Table A3.iv: Differences in views of school related Home Learning Environment**

|  | % Agreement | | | | |
| --- | --- | --- | --- | --- | --- |
|  | **Lowest HLE 0 – 13** | **14 - 19** | **20 – 24** | **25 - 32** | **Highest HLE 33 - 45** |
| I always feel safe in the playground | 79 | 80 | 80 | 87 | 88 |
| Teachers are easily satisfied | 45 | 41 | 32 | 34 | 30 |
| We have lots of unexpected changes to our timetable | 28 | 22 | 17 | 19 | 15 |
| Teachers are available to talk to me privately | 79 | 80 | 83 | 84 | 91 |
| Teachers don't seem to care whether pupils work or not | 17 | 11 | 8 | 9 | 4 |
| Pupils want to do well in exams | 95 | 97 | 96 | 95 | 97 |
| Teachers make sure it is quiet in class | 76 | 61 | 66 | 68 | 65 |
| Other people's bad behaviour often makes it difficult to learn | 80 | 78 | 72 | 70 | 65 |

# Appendix 2: Multilevel analysis results of contextualised experiences of school models

**Table A.2.i:** *Teacher support* **Contextualised Model (impact of individual, family & home environment)**

| Fixed Effects | Year 9 *Teacher support* | | | |
|---|---|---|---|---|
| | Coef | SE | ES | Sig |
| **Early Health Problems** (compared to none) | | | | |
| 1  Health problem | 0.01 | 0.06 | 0.01 | |
| 2 + Health problems | -0.19 | -0.09 | -0.20 | * |
| Missing | -0.12 | 0.19 | -0.13 | |
| **Mother's employment status in KS1** (compared to unemployed)                          Other | -0.25 | 0.15 | -0.26 | |
| Employed full-time | -0.08 | 0.07 | -0.09 | |
| Employed part-time | -0.09 | 0.06 | -0.09 | |
| Employed full-time and studying | -0.47 | 0.16 | -0.49 | * |
| Employed part-time and studying | -0.01 | 0.14 | -0.01 | |
| Studying  or training full time | -0.13 | 0.19 | -0.14 | |
| Missing | 0.04 | 0.09 | 0.04 | |
| **HLE KS1: Parent/child interaction**  (compared to low)                                    High | 0.33 | 0.10 | 0.34 | * |
| Medium | 0.16 | 0.08 | 0.16 | * |
| Missing | 0.15 | 0.10 | 0.16 | |
| **Random Effects** | | | | |
| **School variance** | 0.044 | 0.019 | | |
| **Residual variance** | 0.928 | 0.035 | | |
| **Intra-school correlation** | | 0.045 | | |

**Table A.2.ii:** *School environment* **Contextualised Model (impact of individual, family & home environment)**

| Fixed Effects | Coef | SE | ES | Sig |
|---|---|---|---|---|
| **Year 9 *School environment*** | | | | |
| **Ethnic groups** (compared to White UK Heritage) | | | | |
| White European | -0.05 | 0.13 | -0.05 | |
| Black Caribbean | -0.37 | 0.15 | -0.44 | * |
| Black African | -0.17 | 0.20 | -0.20 | |
| Other Ethnic Minority | -0.14 | 0.18 | -0.16 | |
| Indian | 0.07 | 0.17 | 0.08 | |
| Pakistani | 0.15 | 0.13 | 0.17 | |
| Bangladeshi | 0.07 | 0.29 | 0.08 | |
| Mixed Heritage | -0.19 | 0.11 | -0.22 | |
| **Special educational Needs in Year 9** (compared to none)         School Action | -0.06 | 0.11 | -0.07 | |
| School Action Plus | -0.39 | 0.15 | -0.45 | * |
| Statemented | -0.26 | 0.17 | -0.30 | |
| Missing | -0.12 | 0.06 | -0.14 | * |
| **Family salary in KS2** (compared to none) | | | | |
| £2,500-£15,000 | -0.08 | 0.08 | -0.09 | |
| £17,500-£27,500 | -0.10 | 0.08 | -0.12 | |
| £30,000-£35,000 | -0.11 | 0.09 | -0.12 | |
| £37,500-£66,500 | -0.17 | 0.08 | -0.19 | * |
| £67,500+ | 0.12 | 0.11 | 0.14 | |
| Missing | -0.05 | 0.10 | -0.05 | |
| **Marital status in KS2** (compared to married)        Single | -0.23 | 0.08 | -0.27 | * |
| Separated/divorced | -0.01 | 0.11 | 0.00 | |
| Living with partner | -0.12 | 0.08 | -0.13 | |
| Widow/widower | 0.14 | 0.26 | 0.16 | |
| Other | 0.00 | 0.99 | 0.01 | |
| Missing | -0.01 | 0.07 | -0.01 | |
| **HLE KS1: Parent/child interaction** (compared to low) | | | | |
| High | 0.23 | 0.10 | 0.26 | * |
| Medium | 0.14 | 0.07 | 0.16 | |
| Missing | 0.22 | 0.11 | 0.26 | |
| **HLE KS1: Outings** (compared to low) | | | | |
| High | 0.29 | 0.11 | 0.34 | * |
| Medium | 0.12 | 0.09 | 0.13 | |
| **Random Effects** | | | | |
| **School variance** | 0.232 | 0.037 | | |
| **Residual variance** | 0.745 | 0.030 | | |
| **Intra-school correlation** | | 0.238 | | |

**Table A.2.iii:** *Valuing students* **Contextualised Model (impact of individual, family & home environment)**

| Fixed Effects | Coef | SE | ES | Sig |
|---|---|---|---|---|
| **Ethnic groups** (compared to White UK Heritage) | | | | |
| White European | -0.15 | 0.13 | -0.16 | |
| Black Caribbean | -0.59 | 0.16 | -0.62 | * |
| Black African | -0.29 | 0.20 | -0.31 | |
| Other Ethnic Minority | -0.35 | 0.19 | -0.37 | |
| Indian | -0.13 | 0.16 | -0.13 | |
| Pakistani | 0.36 | 0.12 | 0.38 | * |
| Bangladeshi | 0.27 | 0.27 | 0.28 | |
| Mixed Heritage | -0.23 | 0.11 | -0.24 | * |
| **Family Socio Economic Status in KS2** (compared to the Highest) Other professional non manual | -0.06 | 0.08 | -0.07 | |
| Skilled non manual | -0.25 | 0.10 | -0.26 | * |
| Skilled manual | -0.10 | 0.11 | -0.10 | |
| Semi skilled | -0.26 | 0.13 | -0.27 | * |
| Unskilled | -0.14 | 0.24 | -0.15 | |
| Unemployed: not working | -0.36 | 0.12 | -0.37 | * |
| Missing | -0.23 | 0.26 | -0.25 | |
| **Family salary in KS2** (compared to none) | | | | |
| £2,500-£15,000 | -0.05 | 0.09 | -0.06 | |
| £17,500-£27,500 | -0.10 | 0.09 | -0.11 | |
| £30,000-£35,000 | -0.11 | 0.10 | -0.11 | |
| £37,500-£66,500 | -0.19 | 0.09 | -0.20 | * |
| £67,500+ | -0.02 | 0.12 | -0.03 | |
| Missing | -0.14 | 0.09 | -0.14 | |
| **Marital status in KS2** (compared to married) Single | -0.07 | 0.09 | -0.07 | |
| Separated/divorced | -0.10 | 0.12 | -0.10 | |
| Living with partner | -0.24 | 0.08 | -0.25 | * |
| Widow/widower | 0.28 | 0.28 | 0.30 | |
| Other | 0.25 | 0.98 | 0.27 | |
| Missing | 0.05 | 0.25 | 0.05 | |
| **Random Effects** | | | | |
| **School variance** | 0.037 | 0.017 | | |
| **Residual variance** | 0.915 | 0.034 | | |
| **Intra-school correlation** | | 0.039 | | |

The top of the table header: Year 9 *Valuing students*

**Table A.2.iv:** *Headteacher qualities* Contextualised Model (impact of individual, family & home environment)

| Fixed Effects | Year 9 *Headteacher qualities* | | | |
|---|---|---|---|---|
| | Coef | SE | ES | Sig |
| **Early years English as a 2<sup>nd</sup> Language** (compared to none) | 0.28 | 0.09 | 0.32 | * |
| Missing | -0.04 | 0.91 | -0.04 | |
| **Mother's employment status in KS1** (compared to unemployed)                                        Other | -0.35 | 0.14 | -0.40 | * |
| Employed full-time | -0.14 | 0.07 | -0.15 | * |
| Employed part-time | -0.08 | 0.06 | -0.09 | |
| Employed full-time and studying | -0.35 | 0.15 | -0.40 | * |
| Employed part-time and studying | -0.21 | 0.14 | -0.24 | |
| Studying  or training full time | -0.04 | 0.17 | -0.05 | |
| Missing | -0.07 | 0.07 | -0.08 | |
| **School variance** | 0.121 | 0.025 | | |
| **Residual variance** | 0.762 | 0.029 | | |
| **Intra-school correlation** | | 0.137 | | |

**Table A.2.v: *Poor Behaviour climate* Contextualised Model (impact of individual, family & home environment)**

| Fixed Effects | Year 9 *Poor behaviour climate* | | | |
|---|---|---|---|---|
| | Coef | SE | ES | Sig |
| **Special educational Needs in Year 9** (compared to none)　School Action | 0.16 | 0.10 | 0.19 | |
| School Action Plus | 0.62 | 0.14 | 0.74 | * |
| Statemented | 0.62 | 0.16 | 0.74 | * |
| Missing | 0.17 | 0.05 | 0.20 | * |
| **Mother's qualifications** (compared to none)　Vocational | -0.10 | 0.09 | -0.12 | |
| Academic age 16 | -0.07 | 0.07 | -0.08 | |
| Academic age 18 | -0.18 | 0.10 | -0.22 | |
| Degree | -0.28 | 0.10 | -0.33 | * |
| Higher Degree | -0.50 | 0.13 | -0.59 | * |
| Other professional / Miscellaneous | -0.20 | 0.18 | -0.24 | |
| Missing | -0.28 | 0.23 | -0.33 | |
| **Father's qualifications** (compared to none)　Vocational | -0.17 | 0.09 | -0.20 | |
| Academic age 16 | -0.28 | 0.08 | -0.33 | * |
| Academic age 18 | -0.20 | 0.10 | -0.24 | |
| Degree | -0.38 | 0.10 | -0.45 | * |
| Higher Degree | -0.39 | 0.13 | -0.46 | * |
| Other professional / Miscellaneous | -0.31 | 0.22 | -0.37 | |
| Father absent | -0.18 | 0.08 | -0.22 | * |
| Missing | -0.64 | 0.33 | -0.76 | * |
| **FSM status in Year 9** | 0.25 | 0.08 | 0.30 | * |
| Missing | -0.36 | 0.12 | -0.43 | * |
| **Family Socio Economic Status in KS2** (compared to the Highest)　Other professional non manual | 0.03 | 0.08 | 0.03 | |
| Skilled non manual | 0.17 | 0.10 | 0.20 | |
| Skilled manual | 0.05 | 0.11 | 0.06 | |
| Semi skilled | 0.29 | 0.12 | 0.34 | * |
| Unskilled | 0.16 | 0.22 | 0.19 | |
| Unemployed: not working | 0.06 | 0.12 | 0.07 | |
| Missing | 0.11 | 0.24 | 0.13 | |
| **Marital status in KS2** (compared to married)　Single | 0.03 | 0.08 | 0.03 | |
| Separated/divorced | 0.19 | 0.11 | 0.22 | |
| Living with partner | 0.21 | 0.07 | 0.25 | * |
| Widow/widower | 0.49 | 0.25 | 0.58 | |
| Other | -0.97 | 0.92 | -1.15 | |
| Missing | 0.11 | 0.22 | 0.13 | |
| **Mother's employment in early years**　Working full-time | -0.02 | 0.07 | -0.03 | |
| Working part-time | -0.01 | 0.05 | -0.01 | |
| Self-employed & combination | -0.26 | 0.11 | -0.31 | * |
| Missing | 0.51 | 0.36 | 0.60 | |
| **Random Effects** | | | | |
| **School variance** | 0.132 | 0.026 | | |
| **Residual variance** | 0.707 | 0.028 | | |
| **Intra-school correlation** | | 0.157 | | |

**Table A.2.vi: *Emphasis on learning* Contextualised Model (impact of individual, family & home environment)**

| Fixed Effects | Year 9 *Emphasis on learning* | | | |
|---|---|---|---|---|
| | Coef | SE | ES | Sig |
| **Girls** | 0.10 | 0.04 | 0.10 | * |
| **Early year English as a 2<sup>nd</sup> Language** (compared to none) | 0.32 | 0.14 | 0.34 | * |
| Missing | -0.32 | 1.01 | -0.34 | |
| **Ethnic groups** (compared to White UK Heritage) | | | | |
| White European | -0.13 | 0.14 | -0.14 | |
| Black Caribbean | 0.26 | 0.15 | 0.27 | |
| Black African | 0.60 | 0.20 | 0.64 | * |
| Other Ethnic Minority | -0.10 | 0.20 | -0.10 | |
| Indian | 0.16 | 0.18 | 0.17 | |
| Pakistani | -0.06 | 0.17 | -0.06 | |
| Bangladeshi | -0.35 | 0.30 | -0.37 | |
| Mixed Heritage | -0.01 | 0.11 | -0.01 | |
| **Special educational Needs in Year 9** (compared to none) School Action | -0.21 | 0.11 | -0.22 | |
| School Action Plus | -0.36 | 0.15 | -0.38 | * |
| Statemented | -0.19 | 0.18 | -0.20 | |
| Missing | -0.12 | 0.05 | -0.12 | * |
| **Random Effects** | | | | |
| **School variance** | 0.054 | 0.021 | | |
| **Residual variance** | 0.895 | 0.034 | | |
| **Intra-school correlation** | | 0.057 | | |

**Table A.2.vii:** *Teacher discipline* **Contextualised Model (impact of individual, family & home environment)**

| Fixed Effects | Year 9 *Teacher discipline* | | | |
|---|---|---|---|---|
| | Coef | SE | ES | Sig |
| **Early years English as a 2$^{nd}$ Language** (compared to none) | 0.22 | 0.09 | 0.23 | * |
| Missing | 0.01 | 0.98 | 0.01 | |
| **Mother's employment status in KS2** (compared to unemployed)　Full time employment | -0.18 | 0.09 | -0.19 | * |
| Part time employment | -0.16 | 0.09 | -0.17 | |
| Full time self employed | -0.17 | 0.17 | -0.18 | |
| Part time self employed | -0.24 | 0.14 | -0.25 | |
| Full time employed and studying | -0.25 | 0.22 | -0.26 | |
| Part time employed and studying | -0.21 | 0.15 | -0.22 | |
| Studying full time | -0.39 | 0.24 | -0.40 | |
| Studying part time | -0.02 | 0.24 | -0.02 | |
| Missing | 0.15 | 0.22 | 0.16 | |
| **Father's employment status in KS2** (compared to unemployed)　Other | 0.00 | 0.21 | 0.00 | |
| Full time employment | 0.05 | 0.11 | 0.05 | |
| Part time employment | 0.43 | 0.19 | 0.45 | * |
| Full time employed and studying | 0.44 | 0.23 | 0.46 | |
| Part time employed and studying | 0.45 | 0.45 | 0.47 | |
| Studying/training full time | 0.90 | 0.41 | 0.94 | |
| Missing | 0.03 | 0.11 | 0.03 | |
| **Family Socio Economic Status in KS2** (compared to the Highest)　Other professional non manual | -0.15 | 0.08 | -0.15 | |
| Skilled non manual | -0.22 | 0.09 | -0.23 | * |
| Skilled manual | -0.22 | 0.11 | -0.22 | * |
| Semi skilled | -0.29 | 0.12 | -0.30 | * |
| Unskilled | 0.04 | 0.25 | 0.05 | |
| Unemployed: not working | -0.28 | 0.13 | -0.29 | * |
| Missing | -0.49 | 0.24 | -0.51 | * |
| **HLE KS1: Parent/child interaction** (compared to low)　High | 0.32 | 0.10 | 0.33 | * |
| Medium | 0.17 | 0.08 | 0.18 | * |
| Missing | 0.12 | 0.09 | 0.13 | |
| **HLE KS1: Computer games** (compared to low)　High | -0.03 | 0.09 | -0.03 | |
| Medium | -0.17 | 0.07 | -0.18 | * |
| Missing | -0.13 | 0.10 | -0.13 | |
| **Random Effects** | | | | |
| **School variance** | 0.030 | 0.018 | | |
| **Residual variance** | 0.913 | 0.035 | | |
| **Intra-school correlation** | 0.0320ns | | | |

**Table A.2.viii:** *Learning resources* **Contextualised Model (impact of individual, family & home environment)**

| | Year 9 *Learning resources* | | | |
|---|---|---|---|---|
| **Fixed Effects** | **Coef** | **SE** | **ES** | **Sig** |
| **Special educational Needs in Year 9** (compared to none) School Action | -0.04 | 0.11 | -0.04 | |
| School Action Plus | -0.21 | 0.15 | -0.23 | |
| Statemented | -0.51 | 0.18 | -0.54 | * |
| Missing | -0.13 | 0.05 | -0.14 | * |
| **Father's qualifications** (compared to none) Vocational | 0.17 | 0.09 | 0.19 | |
| Academic age 16 | 0.13 | 0.08 | 0.14 | |
| Academic age 18 | 0.27 | 0.11 | 0.28 | * |
| Degree | 0.31 | 0.09 | 0.33 | * |
| Higher Degree | 0.55 | 0.11 | 0.58 | * |
| Other professional / Miscellaneous | 0.27 | 0.23 | 0.29 | |
| Missing | -0.16 | 0.19 | -0.18 | |
| **Random Effects** | | | | |
| **School variance** | 0.070 | 0.034 | | |
| **Residual variance** | 0.873 | 0.048 | | |
| **Intra-school correlation** | | 0.074 | | |

# Appendix 3: Multilevel analyses of peer data for experiences of school

The *All about Me at school* questionnaires were sent to the peers of EPPSE students from the 125 focal schools.  In total, 67 returned the *All about Me at school* questionnaires.  Peers of the EPPSE students were somewhat more negative about themselves and their school experiences.

**Table A3.i Descriptive statistics for the Views of school scores at the end of Year 9 for peer data**

|  | Mean | Standard deviation | Range | Pupil n |
|---|---|---|---|---|
| **Teacher support** | **2.80** | 0.48 | 1-4 | 1696 |
| **Teacher discipline** | **2.91** | 0.44 | 1-4 | 1624 |
| **Emphasis on learning** | **3.10** | 0.43 | 1-4 | 1732 |
| **Head-teacher qualities** | **2.94** | 0.64 | 1-4 | 1738 |
| **Valuing students** | **2.69** | 0.55 | 1-4 | 1697 |
| **Poor behaviour climate** | **2.54** | 0.48 | 1-4 | 1619 |
| **School environment** | **2.58** | 0.50 | 1-4 | 1745 |
| **Learning resources** | **2.80** | 0.49 | 1-4 | 1747 |

**Table A3.ii: Correlations between the Views of school scores at the end of Year 9 for peer data**

|  | Teacher discipline | Emphasis on learning | Head-teacher qualities | Valuing students | Poor behaviour climate | School environment | Learning resources |
|---|---|---|---|---|---|---|---|
| **Teacher support** | 0.56** | 0.57** | 0.45** | 0.67** | -0.15** | 0.48** | 0.41** |
| **Teacher discipline** |  | 0.48** | 0.41** | 0.49** | -0.13** | 0.38** | 0.33** |
| **Emphasis on learning** |  |  | 0.44** | 0.49** | -0.09** | 0.38** | 0.38** |
| **Head-teacher qualities** |  |  |  | 0.46** | -0.09** | 0.39** | 0.35** |
| **Valuing students** |  |  |  |  | -0.26** | 0.55** | 0.44** |
| **Poor behaviour climate** |  |  |  |  |  | -0.34** | -0.19** |
| **School environment** |  |  |  |  |  |  | 0.56** |

\* Statistically significant at p<0.05     \*\* Statistically significant at p<0.01     all other correlations not significant

**Table A3.iii: Null multilevel models for Views of school at the end of Year 9 for peer data**

|  | Teacher support | Teacher discipline | Emphasis on learning | Head-teacher qualities | Valuing students | Poor behaviour climate | School environment | Learning resources |
|---|---|---|---|---|---|---|---|---|
| **Student level variance (se)** | 0.9029 | 0.9111 | 0.9242 | 0.7560 | 0.8633 | 0.8281 | 0.7783 | 0.8734 |
| **School level variance (se)** | 0.0858 | 0.0626 | 0.0575 | 0.1720 | 0.1250 | 0.1780 | 0.2236 | 0.1152 |
| **Intra-school correlation** | 0.0868 | 0.0626 | 0.0585 | 0.1854 | 0.1265 | 0.1769 | 0.2232 | 0.1165 |
| **No of children** | 1696 | 1624 | 1732 | 1738 | 1697 | 1619 | 1745 | 1747 |
| **No of schools** | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |

# Glossary of terms

***Academic self-concept*** EPPSE derived two measures of Academic self-concept from Year 9 student questionnaire data:
1) 'Academic self-concept for English'
2) 'Academic self-concept for maths'

Both of the above measures are based on items taken from existing well established 'academic self-concept' scales (Marsh, 1990a; 1990b; Marsh & Hau, 2003; Marsh & Craven, 2006).

***Age standardised scores*** Assessment scores that have been adjusted to take account of the pupil's age at testing. This enables a comparison to be made between the cognitive outcome of an individual pupil, and the relative achievement of a representative sample of pupils in the same age group throughout the country or, in this case, the relative achievement of the EPPE sample.

***Anxiety*** A factor derived from Year 9 student questionnaire items that reflect the degree to which the students feel unhappy, worried, nervous, fearful in new situations, or suffer from minor ailments.

***'at risk'*** The term 'at risk' is a complex one which will differ depending on the particular criteria used. For instance, the definition of possible cognitive 'at risk' status used in the ETYSEN study (see Taggart et al., 2006), based on children's cognitive attainment at entry to pre-school, was a score of one standard deviation (sd) below the mean (in standardised assessments) in relation to national norms (at risk). In the more recent EPPSE case studies, there are various definitions of risk and resilience (see Siraj-Blatchford et al., 2011).

***Anti-social behaviour*** A social-behavioural construct identified from teachers' ratings about EPPSE students, collected through a pupil profile based on Goodman's (1997) Strength and Difficulties questionnaire. Five items formed the factor 'anti-social' behaviour e.g. Steals from home, school or elsewhere.

***British Ability Scales (BAS)*** This is a battery of assessments specially developed by NFER-Nelson to assess very young pupils' abilities. The assessments used at entry to the EPPE study and at entry to reception were:

Block building - Visual-perceptual matching, especially in spatial orientation (only entry to study)
Naming Vocabulary – Expressive language and knowledge of names
Pattern construction – Non-verbal reasoning and spatial visualisation (only entry to reception)
Picture Similarities – Non-verbal reasoning
Early number concepts – Knowledge of, and problem solving using pre-numerical and numerical concepts (only entry to reception)
Copying – Visual–perceptual matching and fine-motor co-ordination. Used specifically for pupils without English
Verbal comprehension – Receptive language, understanding of oral instructions involving basic language concepts.

***Birth weight*** In the EPPSE research, babies born weighing 2500 grams (5lbs 8oz) or less are defined as below normal birth weight; foetal infant classification is below 1000 grams, very low birth weight is classified as 1001-1005 grams and low birth weight is classified as 1501-2500 grams (Scott and Carran, 1989). When EPPSE uses this measure in analyses, the categories foetal infant (<1000g) and very low birth weight (1001-1005g) are often collapsed into one category due to small numbers in the former group.

***Centre/School level variance*** The proportion of variance in a particular child/student outcome measure (i.e. Year 9 English Teacher Assessment level at the end of Key Stage 3 in secondary school) attributable to differences between individual centres/schools rather than differences between individual children/students.

***Citizenship values*** A factor derived from Year 9 student questionnaire items that relate to how important students feel certain behaviours are such as strong people not picking on weak people, respecting rules and laws, controlling your temper, respecting other's views, and sorting out disagreements without fighting.

**Comparative Fit Index (CFI)**  The CFI is an index of a statistical model fit that takes into account sample size. Values close to 0.95 indicate good fit (Hu & Bentler, 1999).

**Compositional effects**  The influence of a student's peer group on that particular student's individual outcomes..  For example, the influence of attending a school where a high percentage of students are in receipt of Free School Meals (FSM) or come from disadvantaged backgrounds.  This influence is irrespective of the characteristics (FSM status) of the individual student in question.  For further details see Harker (2001).

**Confidence intervals (at 95 or 99%)**  A range of values which can be expected to include the 'true' value in 95 or 99 out of 100 samples (i.e. if the calculation was repeated using 100 random samples).

**Contextualised models**  Cross-sectional multilevel models exploring individuals' outcomes, while controlling for individual, family and home learning environment characteristics (but not prior attainment).

**Controlling for**  Several variables may influence an outcome and these variables may themselves be associated.  Multilevel statistical analyses can calculate the influence of one variable upon an outcome having allowed for the effects of other variables.  When this is done the net effect of a variable upon an outcome controlling for other variables can be established.

**Correlation** A correlation is a measure of statistical association that ranges from + 1 to -1.

**Cronbach's alpha (α)** A measurement of the internal reliability (or consistency) of the items on a test or questionnaire that ranges between 0 and 1 showing the extent to which the items are measuring the same thing (Reber, 1995).  A value greater than 0.7 (α<0.7) suggests that the items consistently reflect the construct that is being measured.

**CVA (Contextualised Value Added)**   Measures of secondary school academic effectiveness derived from KS2-KS4 contextual value added (CVA) indicators produced by the Department for Education (DfE). At the pupil level, the CVA score was calculated as the difference between predicted attainment (i.e., the average attainment achieved by similar pupils) and real attainment in KS4.  The predicted attainment was obtained by using multilevel modelling controlling for pupils' prior attainment and adjusting for their background characteristics (i.e., gender, age, ethnicity, SEN, FSM, mobility etc.).  For each school, all individual pupil scores were averaged and adjusted for the proportion of pupils attending the school in a specific year.  This final averaged score represents the school level CVA and it is presented as a number based around 1000 (for more technical details see http://www.education.gov.uk/performancetables/schools_08/documents.shtml).

**Dispositions** An overarching term used to refer to factors such as *'enjoyment of school'*, *'academic self concept (English and maths)'*, *'popularity'*, *'citizenship values'* and *'anxiety'*.  The EPPSE study derived these factors from questionnaires completed by students in Year 9 called 'All about Me' and 'All about Me in school'.

**ECERS-R and ECERS-E**  The American Early Childhood Environment Rating Scale (ECERS-R) (Harms et al., 1998) is based on child centred pedagogy and also assesses resources for indoor and outdoor play. The English rating scale (ECERS-E) (Sylva et al., 2003) was intended as a supplement to the ECERS-R and was developed specially for the EPPE study to reflect the Desirable Learning Outcomes (which have since been replaced by the Early Learning Goals, the Curriculum Guidance for the Foundation Stage, and the Early Years Foundation Stage).  For more information see Sylva et al., (2010).

**Educational effectiveness**  Research design which seeks to explore the effectiveness of educational institutions in promoting a range of child/student outcomes (often academic measures) while controlling for the influence of intake differences in child/student characteristics.

**Effect sizes (ES)**  Effect sizes (ES) provide a measure of the strength of the relationships between different predictors and the outcomes under study.  For further information see Elliot & Sammons (2004).

***Emphasis on learning*** A factor derived from Year 9 student questionnaire items that relate to teacher expectations, emphasis on understanding something not just memorising it, teachers believing that it is okay for students to mistakes as long as they learn from them, students wanting to do well in exams, and lessons being challenging.

***Enjoyment of school*** A factor derived from Year 9 student questionnaire items that reflect the degree to which students reported they like lessons and being at school, like answering questions in class, but also how much the student experiences boredom in lessons or feels school is a waste of time.

***Factor Analysis (FA)*** An umbrella term covering a number of statistical procedures that are used to identify a smaller number of factors or dimensions from a larger set of independent variables or items (Reber, 1995). At KS3 EPPSE used:
- Exploratory FA – a type of analyses where no prior (theoretical) knowledge is imposed on the way the items cluster/load.
- Principal Components Analysis (PCA) – a procedure that converts a set of observations of possibly correlated items into a set of values of uncorrelated items called principal components.
- Confirmatory FA – type of factor analyses used where the measure of a factor/construct are tested against a prior (theoretical) knowledge.

***Family characteristics*** Examples of family characteristics are mother's highest qualification level, father's highest qualification level and family socio-economic status (SES).

**Free school meals (FSM)** An indicator of family poverty.

***General Cognitive Ability (GCA)*** A measure of pupils' overall cognitive ability, incorporating non-verbal and verbal BAS sub-scales.

***Growth Curve Modelling*** "In brief, the objective of growth curve modeling1 is to describe a set of time-ordered, within-person observations using only a few parameters. For example, the intra-individual change over time, or within-person learning, that occurs with practice might be described parsimoniously by two parameters, one indicating an individual's initial level of ability (e.g., intercept), and another indicating linear rate of increase or decline in performance across multiple occasions of measurement (e.g., linear slope)....Growth curve modeling methods also allow us to describe and test hypotheses about individual differences in intra-individual change. By allowing the parameters used to describe intra-individual change to vary between individuals we can also model and examine how (and potentially why) individuals differ in their initial levels of performance (intercept), rates of improvement or decline over time (linear slope), asymptotic levels of performance, etc. Examining how the inter-individual differences in particular aspects of intra-individual change captured by each parameter relate to other inter-individual differences (e.g., covariates such as trait personality) brings us one step closer to understanding how and why individuals follow different paths of development" (Ram & Grimm, 2007; p. 303).

***Headteacher qualities*** A factor derived from Year 9 student questionnaire items that reflect the headteacher making sure that students behave well, their presence around the school and interest in how much students learn.

***Hierarchical nature of the data*** Data that clusters into pre-defined sub-groups or levels within a system (i.e. students, schools, local authorities).

***Home learning environment (HLE) characteristics*** Measures derived from reports from parents (at interview or using parent questionnaires) about what children do at home (with/independent of their parents). There are several HLE measures: early years HLE, KS1 HLE, KS2 HLE (please see Appendix 4 for further details).

***Hyperactivity*** A social-behavioural construct identified from teachers' ratings about EPPSE students, collected through a pupil profile based on Goodman's (1997) Strength and Difficulties questionnaire. Several items formed the factor 'hyperactivity' e.g. Restless, overactive, cannot stay still for long.

***Income Deprivation Affecting Children Index (IDACI)*** The IDACI represents the percentage of children in each SOA that live in families that are income deprived. For further details see Noble et al., (2008).

***Index of Multiple Deprivation (IMD)*** The IMD is a measure of a range of characteristics evident in a neighbourhood. For further details see Noble et al. (2004; 2008).

***Internal Reliability/Consistency*** The degree to which the various parts of a test (items) or other instrument (e.g. questionnaire) measure the same variables/construct (Reber, 1995). An example measure would be ***Cronbach's alpha*** (see earlier).

***Intra-centre/school correlation*** The intra-centre/school correlation measures the extent to which the outcomes from children/students in the same centre/school resemble each other as compared with those from children/students at different centres/schools. The intra-centre/school correlation provides an indication of the extent to which unexplained variance in children's/students' progress (i.e. that not accounted for by prior attainment) may be attributed to differences between centres/schools. This gives an indication of possible variation in pre-school centre/school effectiveness.

***Key Stage (KS)*** The English education system splits students into age phases known as Key Stages as follows: KS1 (age 5-7), KS2 (8-11), KS3 (12-14), KS4 (14-16).

***Mean average*** A measure of central tendency that is calculated by summing a set of values (or scores) and then dividing by the number of values or scores (Reber, 1995).

***Multilevel modelling*** A methodology that allows data to be examined simultaneously at different levels within a system (i.e. children/students, pre-school centres/schools, local authorities), essentially a generalisation of multiple regression.

***Multiple Disadvantage Index*** This measure was developed as part of the Early Years Transition & Special Educational Needs (EYTSEN) Project, which focuses on the identification of children 'at risk' of SEN (see Sammons et al., 2004b). An index was created based on 10 indicators in total: three child variables, six parent variables, and one related to the Early years Home Learning Environment (HLE).

**Child variables**
- First language: English as an additional language (EAL)
- Large family: 3 or more siblings
- Pre-maturity / low birth weight

**Parent/HLE variables**
- Mother's highest qualification level: no qualifications
- Social class of father's occupation: Semi-skilled, unskilled, never worked, absent father
- Father not employed
- Young Mother (Age 13-17 at birth of EPPE child)
- Lone parent
- Mother not working / unemployed
- Low Early years Home Learning Environment (HLE)

For further details see Sammons et al., (2002).

***Multiple imputation*** A statistical procedure that replaces missing value with a set of predicted values (Little & Rubin, 1987). This procedure generates several imputed data sets, which are then analysed and the results combined according to Rubin's Rule (Little & Rubin, 1987).

*Multiple regression*  A method of predicting outcome scores on the basis of the statistical relationship between observed outcome scores and one or more predictor variables.

*National Assessment Levels*  The table below shows the levels that could be achieved by a student at different ages in their National Assessments tests / can be awarded to a student for their Teacher Assessment (TA).

| Outcome | Key Stage 1 (KS1), Age 7 | Key Stage 2 (KS2), Age 11 | Key Stage 2 (KS3), Age 14 |
|---|---|---|---|
| **Reading/ English Levels** | Working towards level 1<br>Level 1<br>**Level 2 – Expected Level**<br>Level 3<br>Level 4 | Level 1<br>Level 2<br>Level 3<br>**Level 4 – Expected Level**<br>Level 5<br>Level 6 | Level 1<br>Level 2<br>Level 3<br>Level 4<br>**Level 5 – Expected Level**<br>Level 6<br>Level 7<br>Level 8 |
| **Maths Levels** | Working towards level 1<br>Level 1<br>**Level 2 – Expected Level**<br>Level 3<br>Level 4 | Level 1<br>Level 2<br>Level 3<br>**Level 4 – Expected Level**<br>Level 5<br>Level 6 | Level 1<br>Level 2<br>Level 3<br>Level 4<br>**Level 5 – Expected Level**<br>Level 6<br>Level 7<br>Level 8 |
| **Science Levels** | Working towards level 1<br>Level 1<br>**Level 2 – Expected Level**<br>Level 3<br>Level 4 | Level 1<br>Level 2<br>Level 3<br>**Level 4 – Expected Level**<br>Level 5<br>Level 6 | Level 1<br>Level 2<br>Level 3<br>Level 4<br>**Level 5 – Expected Level**<br>Level 6<br>Level 7<br>Level 8 |

*Net effect*  The unique contribution of a particular variable upon an outcome while other variables are controlled.

*Ofsted*  The Office for Standards in Education, Children's Services and Skills (Ofsted) inspect and regulate services that care for children and young people, and those providing education and skills for learners of all ages.  See Matthews & Sammons (2004), and the Ofsted website (http://www.ofsted.gov.uk/content) for further details.

*Pedagogical strategies*  Strategies used by an educator to support learning. These include the face to face interactions with students, the organisation of resources and the assessment practices.

*(Poor) behaviour climate*  A factor derived from Year 9 student questionnaire items that relate to the general behaviour climate in the EPPSE student's school; students being given a hard time by others if they work hard, level of compliance with school rules, fighting and weapons being brought into school, and whether most students want to leave the school as soon as they can.

*Popularity*  A factor derived from Year 9 student questionnaire items that relate to how popular students feel they are with other teenagers and how many friends they have.

***Pre-reading attainment*** Composite formed by adding together the scores for phonological awareness (rhyme and alliteration) and letter recognition.

***Pre-school effectiveness*** Measures of the effectiveness of pre-schools were derived from Value Added (VA) models of the sample's actual progress during pre-school, controlling for prior attainment and children's background characteristics (Sammons et al., 2004a).

***Primary school effectiveness*** Primary school academic effectiveness scores were obtained from National Assessment data for several cohorts across all primary schools in England. Value-added scores were calculated across the years 2002-4, for each primary school in England and then extracted for schools attended by the EPPE sample (Melhuish et al., 2006a; 2006b).

***Prior attainment*** Measures which describe a participant's achievement at the beginning of the phase or period under investigation (i.e. taken on entry to the study or school, or for Year 9 analyses, outcomes from Year 6).

***Pro-social Behaviour*** A social-behavioural construct identified from teachers' ratings about EPPSE students, collected through a pupil profile based on Goodman's (1997) Strength and Difficulties questionnaire. Several items formed the factor 'pro-social' behaviour e.g. Considerate of other people's feelings.

***Pupil Profile*** An instrument containing Goodman's (1997) Strength and Difficulties questionnaire plus some additional items used to collect information about EPPSE student's social behaviour. It is completed by a teacher who knows the EPPSE student well.

***Quality of pre-school*** Measures of pre-school centre quality were collected through observational assessments (ECERS-R, ECERS-E) completed by trained researchers. For further information see ***ECERS*** and Sylva et al. (2010).

***Quality of secondary schools*** Secondary school quality was derived from measures taken from Ofsted inspection judgments. See ***Ofsted*** for further details.

***Quality of teaching*** Measures from Year 5 classroom observations using the IEO (Stipek) and COS-5 (Pianta) instruments. For further information see Sammons et al. (2006a; 2006b).

***Root Mean Square Error of Approximation (RMSEA)*** The RMSEA is an index measure of model; values less than 0.06 are an indication of a good fit.

***Sampling profile/procedures*** The EPPSE sample was constructed of:
Five regions (six Local authorities) randomly selected around the country, but being representative of urban, rural, inner city areas. Pre-schools from each of the 6 main types of target provision (nursery classes, nursery schools, local authority day nurseries, private day nurseries, play groups and integrated centres) randomly selected across the region.

***School environment*** A factor derived from Year 9 student questionnaire items that relate to how EPPSE students view their school in terms of the physical space (the attractiveness of buildings, the decorative state of the classrooms, the condition of the toilets), as well as its reputation as a good school and how well organised it is.

***School/learning resources*** A factor derived from Year 9 student questionnaire items that relate to practical resources for learning at the EPPSE student's school; amount of computers and getting enough time on them in lessons, and the quality of science labs and the school library.

***School level variation*** School level variance here refers to the percentage of variation in students' outcomes that can be attributed to differences between schools.

***Secondary school effectiveness*** Secondary school academic effectiveness scores were obtained from the Department for Education (DfE). The measure of academic effectiveness is represented by the average KS2 to KS4 contextual value added (CVA) school level scores over 4 years (2006-2009) when EPPSE students were in secondary school. See '***CVA***' as this is the same measure.

***Self-regulation*** A social-behavioural construct identified from teachers' ratings about EPPSE students, collected through a pupil profile based on Goodman's (1997) Strength and Difficulties questionnaire. Several items formed the factor 'self-regulation' e.g. Likes to work things out for self; seeks help rarely.

***Significance level*** Criteria for judging whether differences in scores between groups of children/students or centres/schools might have arisen by chance. The most common criteria is the 95% level (p<0.05), which can be expected to include the 'true' value in 95 out of 100 samples (i.e. the probability being one in twenty that a difference might have arisen by chance).

***Social-behavioural development*** A student's ability to 'socialise' with other adults and pupils and their general behaviour to others. EPPSE uses this overarching name to refer to a range of social-behavioural outcome measures. At age 14, two of these outcomes refer to positive outcomes ('self-regulation' and 'pro-social' behaviour) and two refer to negative outcomes ('hyperactivity' and 'anti-social' behaviour).

***Socio-economic status (SES)*** Occupational information was collected by means of a parental interview/questionnaire at different time points. The Office of Population Census and Surveys OPCS (1995) Classification of Occupations was used to classify mothers and fathers current employment into one of 8 groups: professional I, other professional non manual II, skilled non manual III, skilled manual III, semi-skilled manual IV, unskilled manual V, never worked and no response. Family SES was obtained by assigning the SES classification based on the parent with the highest occupational status.

***Standard deviation (sd)*** A measure of the spread around the mean in a distribution of numerical scores. In a normal distribution, 68% of cases fall within one standard deviation of the mean and 95% of cases fall within two standard deviations.

***Structural equation modelling (SEM)*** is an umbrella term for statistical modelling techniques which allow for testing causal processes and structural relationships (Byrne, 2010).

***Student background characteristics*** Student background characteristics include age, birth weight, gender, and ethnicity.

***Target centre*** A total of 141 pre-school centres were recruited to the EPPSE research covering 6 types of provision - ***Sampling profile/procedures***. The sample of students was drawn from these target centres.

***Teacher Assessment (TA)*** These assessments made by teachers provide measures of students' educational outcomes for English, maths and science in Year 9 (age 14) in the form of National curriculum levels.

***Teacher discipline*** A factor derived from Year 9 student questionnaire items that relate to the level of teacher control during lessons, in terms of behaviour, noise, rule breaking and teachers being bothered if students turn up late.

***Teacher support*** A factor derived from Year 9 student questionnaire items that relate to support given by teachers in terms of helping students, giving them feedback, making them feel confident about their work, rewarding them for good behaviour, being available to talk privately, and marking and returning homework.

***Term of birth*** Using EPPSE student's dates of birth, the EPPSE sample were categorised into three 'term of birth' categories: Autumn born (September to December); Spring born (January to April); Summer born (May to August).

***Total BAS score***  By combining 4 of the BAS sub-scales (2 verbal and 2 non-verbal) a General Cognitive Ability score or Total BAS score at entry to the study can be computed. This is a measure of overall cognitive ability.

***Value added models***  Longitudinal multilevel models exploring individuals' progress over time, controlling for prior attainment as well as significant individual, family and home learning environment characteristics.

**Value added residuals (pre-school effectiveness)**  Differences between predicted and actual results for pre-school centres (where predicted results are calculated using value added models).  See ***Pre-school effectiveness*** for further information.

**Value added residuals (primary school academic effectiveness)**  Differences between predicted and actual results for primary schools measuring pupil progress across KS1 – KS2.  For further information see ***Primary school effectiveness*** and Melhuish et al., (2006a; 2006b).

***Valuing students***  A factor derived from Year 9 student questionnaire items that relate to whether the school values students' views, teachers listen to students views, are respectful and friendly to students, teachers are unpleasant to students if they make mistakes.

***Views of school***  An overarching term used to refer to factors such as 'teacher support', 'school environment', 'valuing students', 'headteacher qualities', 'poor behaviour climate', 'emphasis on learning', 'teacher discipline', and 'school/learning resources'.  The EPPSE study derived these factors from the questionnaire completed by students in Year 9 called 'All about Me in school'.

**References**

Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming (2nd Edition)*. New York: Routledge.

Elliot, K., and Sammons, P. (2004). Exploring the use of effect sizes to evaluate the impact of different influences on child outcomes: Possibilities and limitations. In I. Schagen & K. Elliott (Eds.), *But what does it mean? The use of effect sizes in educational research.* (pp 6-24). Slough: National Foundation for Educational Research.

Goldstein, H. (1995). *Multilevel Statistical Models.* (Second Edition) London: Edward Arnold; New York: Halsted Press.

Goodman, R. (1997). 'The Strengths & Difficulties Questionnaire: A Research Note'. *Journal of Child Psychology & Psychiatry,* 38**,** 581-586.

Grosin, L. and McNamara, P. (2001). *Bedömningsinstrument för skolklimat*, http://www.mdh.se/isb/pedagogik/personal/peter_mcn/sv1.html [Accessed: 17 April 2002].

Harker, H. (2001). *The Effects of Student Compositions on School Outcomes.* Paper presented at the British Educational Research Association Conference, Leeds.

Harms, T., Clifford, M. and Cryer, D. (1998). *Early Childhood Environment Rating Scale, Revised Edition (ECERS-R).* Vermont: Teachers College Press.

Hu, L., and Bentler, P. M. (1999). 'Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives'. *Structural Equation Modeling, 6*, 1-55.

Little, R. J. A. and Rubin, D. B. (1987). *Statistical Analysis with Missing Data*. New York: J. Wiley & Sons.

Marsh, H. W. (1990). 'The structure of academic self-concept: The Marsh/Shavelson model'. *Journal of Educational Psychology*, Vol 82 (4), 623-636.

Marsh, H. W. and Hau, K. T. (2003). 'Big fish little pond effect on academic self-concept: A crosscultural (26 country) test of the negative effects of academically selective schools'. *American Psychologist*, 58, 364-376.

Marsh, H. W., and Craven, R. G. (2006). 'Reciprocal effects of self-concept and performance from a multidimensional perspective: Beyond seductive pleasure and unidimensional perspectives'. *Perspectives on Psychological Science, 1,* 133–163.

Matthews, P., and Sammons, P. (2004). *Improvement through inspection: An evaluation of the impact of Ofsted's work.* Ofsted: Institute of Education, London.
http://www.oftsed.gov.uk/publications/index.cfm?fuseaction=pubs.displayfile&id=3696&type=pdf

Melhuish, E., Romaniuk, H., Sammons, P., Sylva, K., Siraj-Blatchford, I. and Taggart, B. (2006a). *Effective Pre-school and Primary Education 3-11 Project (EPPE 3-11): The Effectiveness of Primary schools in England in Key Stage 2 for 2002, 2003 and 2004. Full Report*. London: Institute of Education, University of London.
http://eppe.ioe.ac.uk/

Melhuish, E., Romaniuk, H., Sammons, P., Sylva, K., Siraj-Blatchford, I. and Taggart, B. (2006b). *Effective Pre-school and Primary Education 3-11 (EPPE 3-11): The Effectiveness of Primary Schools in England in Key Stage 2 for 2002, 2003 and 2004, Research Brief No. RBX06-06.* Nottingham: DfES Publications.

Noble, M., Wright, G., Dibben, C., Smith, G.A.N., McLennan, D., Anttila, C., Barnes, H., Mokhtar, C., Noble, S., Gardner, J., Braswell, S., Covizzi, I. and Lloyd, M. (2004). *The English Indices of Deprivation 2004*, Office of the Deputy Prime Minister, London.

Noble, M., McLennan, D., Wilkinson, K., Whitworth, A., Barnes, H. and Dibben, C. (2008). *The English Indices of Deprivation 2007*. London: Department for Communities and Local Government.

Office of Population Censuses and Surveys. (1995). *Classification of occupations and coding index*. London: HMSO.

Ram, N. & Grim, K. (2007). 'Using simple and complex growth models to articulate developmental change: Matching theory to method'. *International Journal of Behavioral Development*, 31 (4), 303–316.

Reber, A. S. (1995). *Dictionary of Psychology (2nd edition).* London: Penguin Books.

Scott, K. & Carran, D. (1989). 'Identification and referral of handicapped infants'. In M.C.Wang, M.C. Reynolds and H.J.Walberg (eds) *Handbook of Special Education Research and Practice: Low incidence Conditions (Vol 3)* (pp 227-241). Oxford, England: Pergamon Press.

Sammons, P., Smees, R., Taggart, B., Sylva, K., Melhuish, E. C., Siraj-Blatchford, I. and Elliot, K. (2002). *The Early Years Transition and Special Educational Needs (EYTSEN) Project: Technical Paper 1 - Special Needs Across the Pre-School Period*. London: DfES / Institute of Education, University of London.

Sammons, P., Sylva, K., Melhuish, E. C., Siraj-Blatchford, I., Taggart, B., Elliot, K. and Marsh, A. (2004a). *The Effective Provision of Pre-School Education (EPPE) Project: Technical Paper 11 - Report on the continuing effects of pre-school education at age 7*. London: DfES / Institute of Education, University of London.

Sammons, P., Smees, R., Taggart, B., Sylva, K., Melhuish, E. C., Siraj-Blatchford, I. and Elliot, K. (2004b). *The Early Years Transitions and Special Educational Needs (EYTSEN) Project: Technical Paper 2 - Special Educational Needs in the Early Primary Years: Primary school entry up to the end of Year 1*. London: DfES / Institute of Education, University of London.

Sammons, P., Taggart, B., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Barreau, S. & Manni, L. (2006a). *Effective Pre-school and Primary Education 3-11 Project (EPPE 3-11): Variations in Teacher and Pupil Behaviours in Year 5 Classes*. Full Report. London, Institute of Education, University of London.

Sammons, P., Taggart, B., Siraj-Blatchford, I., Sylva, K., Melhuish, E., Barreau, S. and Manni, L. (2006b). *Effective Pre-school and Primary Education 3-11 (EPPE 3-11) Summary Report: Variations in Teacher and Pupil Behaviours in Year 5 Classes.  Research Report No. 817*. Nottingham: DfES Publications.

Sammons, P., Sylva, K., Siraj-Blatchford, I., Taggart, B.,  Smees., & Melhuish., E. (2008a). *Effective Pre-School, Primary and Secondary Education Project (EPPSE 3-14): Exploring pupils' views of primary school in Year 5*. Institute of Education, University of London.

Sammons, P., Sylva, K., Siraj-Blatchford, I., Taggart, B., Smees, R and Melhuish, E. (2008b). *Influences on students' dispositions in primary school: Enjoyment of school, Anxiety and Isolation, and Self-image in Year 5.* Institute of Education, University of London.

Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Toth, K., Smees, R and Draghici , D. (2011a). *Effective Pre-School, Primary and Secondary Education Project (EPPSE 3-14): Influences on Students' Attainment and Progress in Key Stage 3: Cognitive Outcomes in Year 9.* Institute of Education, University of London.

Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Draghici, D. , Toth, K., and Smees, R. (2011b). *Effective Pre-School, Primary and Secondary Education Project (EPPSE 3-14): Influences on Children's development and progress at Key Stage 3: Social Behavioural Outcomes in Year 9.* Institute of Education, University of London.

Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Smees, R., Draghici, D. , and Toth, K. (2011c). *Effective Pre-School, Primary and Secondary Education Project (EPPSE 3-14):* Accounting for variations in students' dispositions in Year 9: exploring *Enjoyment of school*, *Popularity*, *Anxiety*, *Citizenship values and Maths and English Academic self concept*.

Sylva, K., Sammons, P., Melhuish, E. C., Siraj-Blatchford, I. and Taggart, B. (1999). The Effective Provision of Pre-School Education (EPPE) Project: Technical Paper 1 - An Introduction of EPPE. *London: DfEE / Institute of Education, University of London.*

Sylva, K., Siraj-Blatchford, I. and Taggart, B. (2003). *Assessing Quality in the Early Years: Early Childhood Environment Rating Scale Extension (ECERS-E): Four Curricular Subscales.* Stoke on Trent, UK and Stirling, USA: Trentham Books.

Siraj- Blatchford, I., Mayo, A., Melhuish, E., Taggart, B., Sammons, P., Sylva K. (2011). *Performing against the odds: developmental trajectories of children in the EPPSE 3-16 study.* DfE Research Report DFE –RR 128.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. & Taggart, B. (Eds.) (2010). *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education project,* London, Routeledge.

Taggart, B., Sammons, P., Smees, R., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Elliot, K. and Lunt, I. (2006). 'Early Identification of Special Needs and the Definition of 'At Risk': The Early Years Transition and Special Education Needs (EYTSEN) Project'. *British Journal of Special Education, 33 (1),* 40-45.

Teddlie, C. and Stringfield, S. (1993). *Schools Make a Difference: Lessons Learned from a 10 Year Study of School Effects.* New York: Teachers College Press.