CLASSROOM DISCIPLINARY CLIMATE IN SECONDARY SCHOOLS IN ENGLAND: WHAT IS THE REAL PICTURE?

Dr Andrew Jenkins and Dr Akiko Ueno

Contact details:
Dr Andrew Jenkins
UCL Institute of Education
University College London, UK
andrew.jenkins@ucl.ac.uk

Dr Akiko Ueno Middlesex University Business School, UK a.ueno@mdx.ac.uk

INTRODUCTION

The working atmosphere in the classroom is likely to be an important variable in the process of learning in schools. Intuitively, it seems plausible that classroom disciplinary climate could have an impact on student outcomes since pupils will learn less, and make less progress, if there is substantial disruption to their learning environment. There is research evidence to support this. A positive classroom climate is associated with improved motivation and satisfaction of students and improved academic performance (Brown *et al*, 2010; Reyes *et al*, 2012). A recent international study found a correlation between the percentage of lesson time spent on teaching and classroom disciplinary climate, revealing that in lessons where there was more disruptive behaviour teachers devoted more time to keeping order and less time to actual teaching (OECD, 2014).

High rates of attrition of staff from the teaching profession continue to be a concern in many countries, and have been linked to disruptive behaviour i.e. a poor classroom climate. As Haydn (2014) observes "there are very few things in professional life less edifying than being, in effect, locked in a room with 30 children not fully under your control". Difficulties in coping with poor pupil behaviour is associated with burnout and emotional exhaustion among teachers (Dicke *et al*, 2014) and challenging behaviour from students is one of the most commonly cited reasons for quitting the teaching profession (Barmby, 2006; Buchanan, 2010).

So, the topic of classroom climate is clearly an important one for researchers and policy-makers. In this paper we use data from the 2013 round of the Teaching and Learning International Survey (TALIS 2013) to provide new information on classroom disciplinary climate in lower secondary schools in England. The English case is of particular interest because there has been considerable disagreement about the extent to which disruptive behaviour there is, or is not, a problem. TALIS contains data which enables us to assess the extent of disruption in their classes, as perceived by teachers. Moreover, as it contains data from over 30 other countries, the results for England can be set in a wider context. Is there any compelling evidence that classroom climate tends to be worse, on average, in England than in comparator countries? The survey also includes a range of information about the characteristics of the school in which the teacher worked, the pupils which they taught, and the teachers themselves. We draw on this data to test hypotheses about classroom climate can be

explained by school-level characteristics? Which characteristics of the teacher, and of the pupils in the classroom, are associated with favourable classroom climate in England?

The next section reviews the evidence base on disciplinary climate in schools in England, highlighting the gaps in the literature and exploring the reasons for the lack of consensus on this topic. Our third section describes the TALIS 2013 data which we use in the analyses, and the methods used to analyse the data. The fourth section uses the TALIS data to put disciplinary climate in English classrooms into international context, addressing the key issue of whether classroom climate is actually better or worse than in other countries. We also draw on data from PISA here to supplement the findings from TALIS. Our fifth section uses regression analysis to model the factors associated with classroom climate in England. A final section draws together the main findings and discusses their implications.

EVIDENCE REVIEW

Disruptive behaviour by pupils in the classroom and its potential for harmful effects on learning has been an active area of research for many years (Fraser, 1989; Rutter and Maugham, 2002). Concerns about deficits in classroom climate have been raised in many countries (Haydn, 2014, p.35). Darling-Hammond *et al* (2005) and Hammerness (2011) identify poor classroom climate as a significant problem in North American schools. Deficits in classroom climate have also been regarded as prevalent in Australia, Israel and Sweden (Lewis, 2006; Granstrom, 2006; Ben-Peretz *et al*, 2006). A comparative study by Elliott and Phuong-Mai (2008) found that classroom climate tended to be better in Russian and Chinese schools than in English and U.S. schools and the authors maintained that this was a contributory factor in explaining differences in internationally-comparable student test score results such as PISA.

In England there has been considerable debate and disagreement about the extent of deficits in classroom climate. Newspaper reports have often given an alarming portrayal of pupil disruption in classrooms while official sources have produced a very different picture.¹ In

¹ Headlines from a sample of recent newspaper reports give a flavour of the media coverage on classroom climate in England: "Poor parenting leading to decline in pupil behaviour" (*Daily Telegraph*, 29 March 2013); "English pupils are among the worst behaved in the world" (*Daily Mail*, 14 April 2014); "An hour of teaching each day lost to bad behaviour" (*Daily Telegraph*, 25 Sept 2014); "Ex-soldiers sent into schools to improve pupil behaviour" (*Daily Telegraph*, 15 November 2013); "Energy drinks fuelling rise in bad behaviour in schools, warn teachers" (*The Independent*, 5 April 2015); "School behaviour tsar appointed to tackle classroom disruption" (*Guardian*, 16 June 2015).

2012 the Department for Education published a review of the evidence on pupil behaviour in schools (DfE, 2012a). Referring to Ofsted data for the period up to the end of 2011 the review stated that 92.3% of schools in England had been judged either "good" or "outstanding" for standards of behaviour, with a further 7.5% judged to be "satisfactory" and less than one per cent (0.3%) found to be "inadequate" for behaviour. It was acknowledged that there was some variation by school type, with 93.9% of primary schools and 84.4% of secondary schools judged to be either good or outstanding but clearly, measured on this basis, standards of behaviour were generally very high indeed. A report by Sir Alan Steer concluded that standards of behaviour were high for the great majority of young people. He maintained that the misconduct of a few represented a small percentage of the seven million pupils in the school system. While there was concern over behaviour standards this tended to be fuelled by reports of a small number of well-publicised incidents which were in fact rare and unrepresentative. Moreover, standards had, he thought, tended to improve over the last 30 years (Steer, 2009).

Other sources of evidence have been much less optimistic. An Association of Teachers and Lecturers (ATL) survey of over a thousand teachers found that 60% of them thought that they had some disruptive pupils in their classrooms and 98% of them reported that this had disrupted pupils' work at times (ATL, 2009, cited in Haydn, 2014). The NASUWT union conducts an annual survey of teachers called "The Big Question" and in 2014, when over 10,000 teachers responded, the results on pupil behaviour suggested that disruption of classes was a substantial issue for teachers. Just over two thirds of respondents, 68%, felt that there was a widespread behaviour problem in schools and some 37% said that there was a behaviour problem in their schools. The top five causes of day-to-day behaviour problems cited by teachers were chatter in class (66%), failure to complete work (57%), inability to follow rules (54%), backchat (50%), and a failure to bring equipment (46%). Over half of teachers responding to the survey, 52%, said that they had experienced verbal abuse by pupils in the last year (NASUWT, 2014).² The large number of pupil exclusions from schools in England, with disruptive behaviour a frequent cause of such exclusions, casts further doubt on the notion that there is little or no problem with disruption in English schools. For instance in 2009/10 there were 5,740 permanent exclusions and 331,380 fixed period

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² The NASUWT survey has a very large sample size, but needs to be treated with caution as those who respond are self-selecting and therefore may not be fully representative of the teaching profession overall.

exclusions from maintained schools in England (DfE, 2012b). Persistent disruptive behaviour was the most common reason recorded for both types of exclusions, accounting for 29% of the permanent exclusions, and 24% of the fixed period exclusions.

So a rather sharp contrast emerges between the impressions to be derived from official documents and a range of other sources of evidence. The "official" view on behaviour has been heavily dependent on evidence from Ofsted.³ It is, then, particularly worthy of note that Ofsted has recently become much less sanguine about pupil behaviour in England. After carrying out a survey of teachers on the issue of disruption, Ofsted claimed that due to lowlevel disruption, pupils were "potentially losing up to an hour of learning a day in English schools" with a detrimental impact on life chances. In primary schools about half of teachers identified calling out in lessons by pupils as the most pervasive problem, followed by disturbing other children were the most widespread forms of disruption, while not getting on with work, identified by over a third of teachers and not having the correct equipment, identified by a quarter of teachers were the most widespread disruptive behaviour in secondary schools. Some 40% of teachers who identified 'talking and chatting' as a key problem stated that it occurred in almost every lesson (Ofsted, 2014). Some of the survey findings might be interpreted in a less bleak way than Ofsted chose to do. For example, on the impact of disruptive behaviour, only 22% of primary school teachers and 27% of secondary school teachers felt that disruption had a high impact on learning. As for the amount of time lost on average per hour of lesson time by disruption this was reported to be less than a minute by 22% of secondary school teachers and 25% of primary school teachers, with 62% of secondary teachers and 66% of primary teachers estimating the loss at under 5 minutes per hourly lesson.

International surveys are a further potential source of evidence. The PISA surveys contain responses by *pupils* about the disciplinary environment in class. For example, based on data from PISA 2009, Bradshaw *et al* (2010), report that in England 31% of pupils surveyed felt that "in most or all lessons...there is noise and disorder". While PISA test scores have

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³ For instance, the DfE's (2012a) evidence review took Ofsted inspection data as the "starting point for gaining an overview of the national level of behaviour in schools in England" justifying this on the grounds that it was the only national source of statistical data on pupil behaviour in schools (DfE, 2012a). Similarly, in oral evidence to the House of Commons Education Committee, Sir Alan Steer acknowledged that in his assessment of behaviour standards he had put "a lot of emphasis on Ofsted" (House of Commons Education Committee, 2011).

attracted a great deal of attention, educational researchers have made rather little use of other parts of the survey including evidence on disciplinary climate. Nevertheless, Haydn (2014, p36), drawing on this evidence, suggests that 'teachers in England may be teaching in more difficult contexts than their counterparts elsewhere'. Similarly, the (apparently) poor position of England on rankings of disruptive pupil behaviour in PISA 2009 led Hallam to conclude that, while cultural factors might account for some of this, England appeared to be doing worse even when compared to other European countries (Hallam, 2011).⁴

There is as yet, then, no consensus on the extent to which disciplinary climate is a problem in schools in England. Based on the evidence reviewed in this section it seems clear that the 'official' view (DfE, 2012a), which held that disruptive behaviour in classrooms in England was minimal, is not tenable. Even the recent evidence from Ofsted contradicts it. But several commentators have stressed the need for more evidence. According to the Education Committee "one reason for the difficulty in forming a view on standards of behaviour is the lack of comprehensive data on the subject beyond that relating to school exclusions" (House of Commons Education Committee, 2011), while Haydn (2014, p 37) also believes that "we appear to have an uncertain grasp of the scale and breadth of the problem" and therefore need more data on the topic. Information from comparative international surveys seems to have been under-utilised in the debate to date. Evidence on behaviour from the well-known PISA survey has been only lightly and impressionistically used by educational researchers and there is scope to interrogate it more thoroughly and systematically. Data from the 2013 round of TALIS have only become available fairly recently and have not been used at all to date. It provides an invaluable teacher perspective on pupil behaviour in classrooms. In particular these international surveys can help to uncover whether there is any truth at all in the notion, commonly aired in media headlines, that pupils in England are among the worst-behaved in the world. Whether the international evidence really puts England in a less favourable position than elsewhere on pupil behaviour in school deserves a careful appraisal.

DATA, METHOD AND MEASUREMENT

Our objectives are to utilise international survey data to throw new light on the prevalence of poor classroom disciplinary climate in schools in England and to analyse the factors

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⁴ See the section on international perspectives below for a detailed appraisal of England's position in comparative international tables.

associated with classroom disciplinary climate. In this section we describe the data and methods used to accomplish these objectives. Research on classroom climate is a sub-set of a broader literature on classroom management (Seiz and Kunter, 2015). Classroom management is about the approaches adopted by teachers to establish and maintain order in classrooms. Of course, order in the classroom does not mean passivity, absolute silence or rigid conformity to rules (Doyle, 2006). Broadly speaking, a favourable classroom climate is one in which there is a well-ordered and calm environment in which learning can take place. A range of different scales have been developed to measure classroom climate (Haydn, 2014; Fraser, 2014). The majority focus on pupils and a few on the teacher perspective. In this paper we use data from the OECD's TALIS 2013 survey of teachers as our main source but also triangulate with evidence from the PISA survey which contains information gathered from pupils and headteachers.

In the TALIS dataset, classroom disciplinary environment was measured by responses to four statements. Teachers were asked to what extent they agreed with a set of statements about a particular class which the teacher had taught, referred to as the 'target class'. The relevant statements with regard to the class were:-

'When the lesson begins I have to wait quite a long time for students to quieten down'.

'Students in this class take care to create a pleasant learning atmosphere'.

'I lose quite a lot of time because of students interrupting the lesson'.

'There is a lot of disruptive noise in this classroom'.

Teachers were asked to respond to each of the statements on a four point scale, from strongly disagree to strongly agree. So classroom disciplinary climate was measured by a number of variables including the amount of time it takes to ready students for a lesson, the number of student interruptions, and the amount of noise in the classroom.

The most recent round of TALIS was conducted in 2013 with over 30 countries, or parts of countries, participating and including England for the first time. The TALIS survey in England achieved samples of 154 schools and 2,496 teachers. This represented response

rates of 75% for schools and 83% for teachers, exceptionally high response rates compared to other school and teacher surveys in England (Micklewright *et al*, 2014). The 154 schools included 76 local authority maintained schools, 68 academies and 10 independent (feepaying) schools.

Firstly, to better understand the prevalence of deficits in classroom climate, the TALIS data were used to measure the extent to which teachers in England perceived problems of poor disciplinary climate and to place that experience in international context by comparing with a range of other countries. We make comparisons with averages for all countries in TALIS; with a sub-group of European countries which are likely to be culturally similar; also with a group of high-performing countries. We also analysed data from recent rounds of PISA. Questions from this dataset, which contains responses from headteachers and students, usefully supplement the responses from teachers in TALIS.

Secondly, to gain insights into the factors which may influence classroom disciplinary climate, we conducted analysis of TALIS micro-data for England. Any plausible model for classroom climate should allow that it be influenced by teacher characteristics, by the characteristics of the students in the class, and by teacher-student relationships (Wubbels et al, 2015) and we seek to develop our empirical model along these lines. The contextual data in TALIS means that the school, teacher and class variables associated with class disciplinary climate can be investigated. This was accomplished, firstly, by looking at bivariate correlations, and, secondly, multiple regression models with classroom climate as the outcome of interest. Based on the four questions about classroom climate, OECD (2014) created a derived index with higher scores implying a better classroom climate. We use a standardised form of this measure for England with a mean of zero and a standard deviation of one. Hence any score above zero implies a better than average classroom climate.

In design TALIS was not a simple random sample. The survey was actually a stratified, two-stage design, with schools being selected within strata at the first stage and in the second stage teachers within those schools being selected – in other words, there was both stratification and clustering. In obtaining estimates of standard errors and confidence intervals it was necessary to take the complex design of the survey into account. The OECD developed a set of weights which can be used to accomplish this (see Micklewright *et al*, 2014 for more detail on the weights). All our estimates used these weights and the statistical

software package Stata, which can utilise such weights straightforwardly, was used to derive the estimates in this paper.⁵

The TALIS data has some limitations. The information collected in TALIS consists of selfreports by teachers (and headteachers). This includes the information on classroom climate. It is teachers' own perceptions of classroom climate rather than being based on 'objective' assessment by external assessors. Secondly, as an international survey, familiar caveats about that type of survey apply to TALIS. Perhaps the questions were interpreted in somewhat different ways in different countries due to language and cultural differences. The OECD, at international level, and the local organisers of the survey in each country did a great deal of work to ensure that such issues were addressed and, as far as possible, overcome but the possibility that comparability across countries was not perfect cannot be ruled out. So there may, for instance, have been cultural differences in what is perceived as a noisy or disruptive classroom. Thirdly, TALIS is a cross-sectional survey and suffers the welldocumented limitations of surveys of that type, too. In particular, while it can reveal associations between variables, it cannot unpick causal links with any degree of certainty. For example, an association between self-efficacy and classroom climate might occur because teachers with high self-efficacy are better at controlling classrooms, but alternatively it could merely be that there is some third factor which is driving both self-efficacy and classroom climate. While these limitations need to be borne in mind, the TALIS data are, nonetheless, of great value in putting English experience into a wider international context and also for revealing patterns of association with classroom climate.

INTERNATIONAL PERSPECTIVES ON CLASSROOM DISCIPLINARY CLIMATE IN ENGLAND

International Comparisons using TALIS 2013 data

The responses to the TALIS questions on classroom disciplinary climate in England showed nearly four-fifths (79% of respondents) of teachers either disagreed or strongly disagreed that it took quite a long time for students to quieten down at the start of the lesson. 74%

⁵ An alternative, but equivalent, way to address the clustering would be to fit multi-level models. However, weights would still be required to deal with other aspects of the complex survey design (Heeringa *et al*, 2010).

agreed/strongly agreed that students in the lesson took care to create a pleasant learning environment. 72% either disagreed or strongly disagreed that they lost quite a lot of time due to students interrupting the lesson. As for disruptive noise, some 22% agreed or strongly agreed that there was a lot of noise in the classroom.

But the crucial questions is - how did England compare with other countries on these variables? In Table 1 results for England on classroom climate are compared with averages for three groups of countries. In the right-most column are the averages presented for all countries in TALIS.⁶ The next column from the right contains averages for nine high-performing countries, as defined by Micklewright *et al* (2014). These are countries where schoolchildren significantly out-performed English schoolchildren in tests in recent rounds of PISA. There is a further column containing averages for 11 European countries. So the table enables comparisons on behaviour to be made with high-performers academically and with countries which are broadly similar culturally.

[TABLE 1 HERE]

The first row of the table shows the proportion of teachers who agreed or strongly agreed with the statement "When the lesson begins I have to wait quite a long time for students to quieten down". The responses from teachers in England, with only 21% agreeing/strongly agreeing with the statement was well below the average for all countries in TALIS (29%), some 10 percentage points below the proportion in high-performing countries, which averaged 31% and fully 15 percentage points below the average for the European comparator countries. England was below all of the high-performing countries on this measure except for Japan and below all of the 10 European comparator countries (albeit very marginally in the cases of Denmark and Italy). A fairly high proportion of teachers in England agreed or strongly agreed that pupils in their class took care to create a pleasant learning environment – at 74% England was slightly better than the all-country average (71%) while the average for the high-performing countries was 69% and for the European comparators, 68%. As for the proportion of teachers who agreed or strongly agreed with "I lose quite a lot of time because of students interrupting the lesson" this was 28% compared to the average for all countries of 30%. In the high-performing countries about 30% on average agreed or strongly agreed,

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⁶ The U.S. was excluded from these all-country comparisons in TALIS.

while 34% did so, on average, across the European comparator countries. The proportions agreeing/strongly agreeing that there was a lot of disruptive noise in the class was as low as 13% in Japan, and as high as 39% in Spain and 55% in Brazil. Once again the proportion among teachers in England, at 22%, was lower than the average for all countries, which was 26%, and also lower than averages for high-performing countries (26%) and European comparators (28%). On each of the items measuring classroom climate in TALIS 2013, then, the results for England were somewhat better than both the all-country average and the average for nine high-performing countries. They also tended to be considerably better than for a group of European comparators.

[TABLE 2 HERE]

Further Evidence from PISA

Some further international comparative data is available in the various PISA surveys. Here we focus on the two most recent – those conducted in 2009 and 2012 (OECD, 2010; 2013). Now, unlike TALIS, the PISA surveys have not gathered data from teachers but they contain information on school or classroom climate from students and headteachers. In both 2009 and 2012 headteachers were asked about various issues which hindered their schools. Included on the list of items were 'disruption of classes by students' and 'students lacking respect for teachers'. Responses are summarised in Table 2. It is apparent from this table that the views of headteachers in England were substantially more positive than the averages for all countries in the survey. For example, in both 2009 and 2012, England was more than 20 percentage points below the all-country average for the proportion reporting that disruption occurred to some extent or a lot. The figures for England were also much lower than the averages for the high performers or the European comparators in both 2009 and 2012. Table 3 shows responses by students to a set of questions about disciplinary climate. Although the estimates in Tables 2 and 3 are not directly comparable they convey the sense that students in England were more pessimistic than heads about classroom climate. In 2009, almost a third of students reported noise and disruption in most or all of their lessons in English and over a quarter felt that students were not listening to the teacher in most or all of the lessons. The numbers for 2012 – this time referring to lessons in maths - show a very similar pattern. The figures for England suggest that students experienced a good deal of disruption in their classroom. Nonetheless, the figures for England tended to be similar to, or slightly below, the all-country average and the average for high-performing countries in

PISA. They were invariably lower than, and sometimes substantially lower than, the average for European comparator countries.

[TABLE 3 HERE]

THE CORRELATES OF CLASSROOM CLIMATE IN ENGLAND

Why might there be variation in classroom climate between schools and also between classes within the same school? As well as classroom climate, TALIS provides rich information about schools, teachers and classes. It is, of course, well known that any cross-sectional survey has considerable limitations for the drawing of causal inferences. Nonetheless, the contextual data in TALIS can yield valuable insights about the factors associated with favourable, and less favourable, classroom climate in lower secondary schools in England. In this section we develop, and then test, some hypotheses about the correlates of classroom climate. There are seven hypotheses – the first four related to the type and other characteristics of the school, and the remainder to the characteristics of the pupils and the teacher in the class.

Developing hypotheses

There is much evidence that attending private sector schools confers advantage in adult life. For instance a disproportionate share of people in high-status professions have attended private schools (Kirby, 2016). Some, but not all, of the benefits from private schooling occur because of the higher educational attainment of pupils attending such schools and there is therefore considerable research interest in understanding why and how better educational qualifications are achieved in private schools (Green *et al*, 2012; Jerrim *et al*, 2016). Is there a more favourable classroom climate, on average, in fee-paying schools which could be one factor in better learning outcomes of their pupils? Here, we consider whether there is a relationship between classroom climate and type of school. It is plausible that whether the school is in the private or public sector may be related to classroom climate, perhaps because of differences in class size or the socio-economic background of the pupils in such schools (OECD, 2009). Using the TALIS data for England differences by sector can be tested for.

H1: The type of school will be related to classroom climate. Specifically, it is expected that classroom climate will be more favourable, on average, in fee-paying schools than in state schools.

Some research studies suggest a relationship between the general school climate and the climate for learning within a class (OECD, 2009; Koth *et al*, 2008). School climate may be defined in various ways but, broadly speaking, it refers to the quality and character of school life. This may include the quality of relations between staff and students, the safety of the school, and the extent of aggressive behaviour, bullying and other disciplinary problems. *H2: Classroom climate will tend to be more favourable the better is school climate in general.*

Much of the practitioner literature on ways for schools to achieve high standards of behaviour focuses on the key role of school behaviour policy. The argument is that a clear behaviour policy, agreed and communicated to staff, pupils and parents and consistently applied throughout the school will form the basis of an effective approach to managing behaviour (House of Commons Education Committee, 2011). Recently, Ofsted has asserted that teachers in a substantial number of schools felt that headteachers and other members of the leadership team were not doing enough to apply their school's behaviour policy consistently. The implication was that teachers lacked support from their leaders in tackling behaviour issues (Ofsted, 2014).

H3: A positive classroom climate is more likely when the school has a clear behaviour policy which is consistently applied and supported by the senior leadership team within the school.

In the survey commissioned by Ofsted, three-quarters of teachers thought that the most important factor in building a positive learning culture was 'communicating high expectations about behaviour to both pupils and their parents', while the second most important factor was 'engaging parents on issues about behaviour' (Ofsted, 2014). The school's efforts to enforce standards need to be backed up by parents. This leads then to our fourth hypothesis:-

H4: The probability of disruptive behaviour by pupils in the classroom will be reduced if there are (a) good relationships between the school and parents, and (b) the involvement of parents in the formulation of school policy.

The characteristics of the pupils will very likely make a difference to the disciplinary climate of the class. Previous research has suggested that climate was better, on average, in classes containing more advantaged pupils (OECD, 2009). Also, perhaps unsurprisingly, it has been shown that class climate tended to be worse when there were more children with behavioural problems in the class (Koth *et al*, 2008).

H5: It is hypothesised that classroom climate will be more favourable, on average, when the class contains (a) more pupils from advantaged backgrounds, and (b) fewer children with behavioural problems.

The skills and competence of the teacher may well have an impact on establishing a good disciplinary climate in the class. Experienced teachers are likely to have developed competences in the handling of a class which novices lack (Elliott, 2009). Evidence from the first round of TALIS (OECD, 2009) showed that the self-reported capability of the teacher – their self-efficacy - and their qualifications and experience were all correlated with the classroom disciplinary climate. Hence:

H6: Classroom climate will tend to be higher where teachers are more able, have better qualifications and more experience.

The notion that appropriate training can help teachers to develop classroom management skills is a common theme in the literature. International survey evidence suggests that many teachers identify a need for professional development in this aspect of their work (OECD, 2009; 2014). A survey of 1,600 teachers in England which asked about how well their initial teacher training had prepared them found that two-fifths of teachers (41%) felt that initial training had been 'poor' or 'very poor' and only about a fifth that it had been 'good' or 'very good' (NFER, 2012). Expert witnesses before the Education Committee also placed considerable emphasis on the importance both of initial training and continuing professional development (CPD) focused on behaviour management for teachers (House of Commons Education Committee, 2011). So we generate our seventh, and final, hypothesis: *H7:* (a) Classroom climate will be lower where teachers have identified a need for CPD in behaviour management, while (b) teachers who have already engaged in CPD which focused on behaviour management will tend to report a more favourable classroom climate.

Testing hypotheses: bivariate correlations

We investigated the factors associated with classroom climate using the OECD (2014) standardised index. Scores above zero imply classroom climate (as perceived by the teacher of the class) was better than average and scores below zero that classroom climate was below average. Firstly, consider the hypothesis about type of school (H1). Distinguishing three broad types of school (maintained, academy, and fee-paying) among the schools in England which participated in TALIS, there was evidence that classroom climate was significantly higher, on average, in fee-paying schools. As shown in Table 4 the mean difference between maintained schools and independent schools was some 44% of a standard deviation of the classroom climate score. This is a substantial difference. The mean classroom climate score was also slightly higher in academies than in maintained schools but this difference was small and not statistically significant.

[TABLE 4 HERE]

H2 is about school climate. We used two indices of school climate developed by the OECD, which measure different aspects of school climate. The first is concerned with the extent to which there is a climate of mutual respect in the school, while the second is a measure of the level of delinquency and violence. The results in Table 4 show that there was a very weak and statistically insignificant correlation between classroom climate and the mutual respect index, while the index of delinquency and violence was correlated significantly with classroom climate. There was, then, some support for H2 in the TALIS England data. The effect size was small – a one standard deviation (SD) increase in the delinquency/violence measure was associated with 7% of an SD deterioration in classroom climate.

On the next hypothesis (H3) there are not questions in TALIS which ask directly about whether a behaviour policy was consistently applied throughout the school or whether the school leadership team fully supported teachers in addressing problems of behaviour. So we use three items from the teacher questionnaire which may indirectly throw some light on these issues. Teachers were asked how far they agreed/disagreed that the school had a 'culture of shared responsibility for school issues'; whether the school had 'an effective school management team' and whether the school management team gave a 'clear vision and direction'. The bivariate regressions in Table 4, with classroom climate score as the response variable, reveal that each of these variables was significantly related to classroom climate.

For instance, the classroom climate score was 0.18 SD lower if the teacher either disagreed or strongly disagreed with the statement about a culture of shared responsibility relative to teachers who agreed with it, and this result was statistically significant. Similarly, if the respondent disagreed/strongly disagreed with the statement about an effective school management team the level of classroom climate reported was over a fifth of an SD lower, on average, compared to those respondents who agreed with the statement. These results are at least not inconsistent with H3 although it should be acknowledged that the TALIS questions here are not measuring exactly what would ideally need to be measured to fully test this hypothesis.

A question asked only of teachers in the England survey was the extent to which they agreed with the statement that 'parents are supportive of my role as their children's teacher'. We used this to test Hypothesis 4A. The bivariate regression results in Table 4 show that the mean classroom climate score was 0.29 SD lower if teacher disagreed and 0.46 SD lower if they strongly disagreed relative to teachers who agreed with this statement. These results are consistent with Hypothesis 4A on the importance of good parent/school relations.

As for hypothesis 4B, concerned with parental involvement at the school, teachers were asked about the extent of their agreement with the statement that the school provided opportunities for parents to participate actively in school decisions. The bivariate regression analysis in Table 4 showed that this variable was not significantly related to class climate. Indeed with an R² statistic of 0.004 it had almost no explanatory power. Analysis of similar items on the headteacher questionnaire (not reported in detail here) on whether the principal felt there was a lack of parental involvement, and the extent to which the principal felt that parents participated actively in decisions also revealed no statistically significant relationships with classroom climate score. In short, no evidence was found in support of Hypothesis 4B.

A decomposition of the variance in classroom disciplinary climate score revealed that quite a small proportion of the variation, only about 18 percent of the total variation in the score, was accounted for at the school level. Most of the variation was at the class level. In other words, it was generally not the case that certain schools had uniformly good or uniformly bad classroom disciplinary climate. It varied a good deal between different classes within the same school. It seems that most of the variation, then, must be accounted for either by

characteristics of the particular teacher or of the particular class, and so it is on these factors which we now focus.

Hypothesis 5 concerned the characteristics of the pupils in the class. Classroom climate tended to be more favourable when there were higher proportions of academically-gifted pupils. When the teacher stated that there were no academically gifted pupils in the target class, the classroom climate score was almost 30% of a standard deviation below the overall mean while classes with high proportions of academically gifted pupils tended to be well above the mean. Conversely, classroom climate tended to be less favourable when there were higher proportions of students with behavioural problems. If the teacher stated that more than 30% of a class consisted of such students then the classroom climate score was over 0.75SD lower than classes where only 1-10% of students had behavioural problems, and more than a whole SD below that of classes containing no students with behavioural problems.

Focusing now on how classroom climate varied according to the characteristics of the teacher (H6), results in the TALIS England survey showed that the number of years of teaching experience was strongly associated with classroom climate. The gap, on average, between the least experienced teachers (5 years or less of experience) compared to the most experience, with 16 or more years of experience, was almost 40% of a standard deviation of the classroom climate score.

Table 4 also contains information on the relationship between a teachers' qualification level and classroom climate. Nearly all (over 95%) of the teachers in the TALIS England sample were qualified to BA or MA level. Those with Masters degrees reported slightly higher levels of classroom disciplinary climate, on average, compared to those with a Bachelor degree but this difference was not statistically significant.

As part of their work on TALIS, the OECD (2014) constructed an index of teacher self-efficacy, based on responses by teachers to 12 questions encompassing three different domains: managing students (ensuring that they follow rules, are not disruptive etc), instructing students, and motivating students to learn. We use this scale here, standardising it so that the mean score among teachers in England was zero with an SD of one. Now a one SD increase in this self-efficacy score was associated with a one-third of an SD increase in

classroom climate. Hypothesis 6, then, found considerable support in the data for teachers in England.

The results in Table 4 provide strong confirmation of Hypothesis 7A. Those teachers who reported a moderate or high need for CPD in behaviour management also had classroom climate scores which were, on average, three-quarters of an SD lower than those teachers who stated that they had no need for CPD in behaviour management. Where a low need for CPD in behaviour management was identified then classroom climate scores were, on average, 39% of an SD lower than for teachers who said they did not need this form of training. However, no support was apparent for Hypothesis 7B - there was no evidence that classroom climate tended to be different where teachers reported large gains from CPD in behaviour management relative to those where the reported gains were moderate, low or none. Moreover, classroom climate tended to be lower amongst those who had done some CPD in behaviour management than amongst those who had not done this training, by about 0.19 SD on average. This was probably a selection effect – those who were less competent in behaviour management or else faced with the challenge of teaching particularly difficult classes may have been more likely to undertake such CPD.

Testing hypotheses: multivariate analysis

While the bivariate regression results are of interest they only establish whether or not there was a correlation between a particular explanatory variable and classroom climate. If a significant correlation was found this could have arisen because these two variables were really related to each other. But it might be that they both just happen to be associated with some third variable and this is why the correlation occurs. Are the relationships which have emerged here still statistically significant once other factors are allowed for? To address questions such as this, multiple regression analysis can be used. The rationale for using this technique is that it enables us to control for other factors when analysing the relationship between each explanatory variable and teachers' self-efficacy.

We therefore estimated multiple regression models with the results reported in Tables 5 and 6. The dependent variable throughout the multiple regression modelling was the OECD index of classroom climate for England standardised to have a mean of zero and a standard deviation of one - that is, the same dependent variable as in the analysis of bivariate

correlations. Several multiple regression models were estimated, starting with only a very few covariates and gradually adding further variables (a few variables, which proved statistically insignificant were also removed in the interests of model parsimony – see discussion below).

[TABLE 5 HERE]

Table 5 presents three models. The first model contains only school characteristics – type of school and school climate (delinquency and violence) index. Here independent schools were found to have significantly higher classroom climate – by over a third of an SD of the classroom climate index. The school climate (delinquency and violence) index was statistically significant but had only a small effect size, with a one SD increase in this variable associated with a worsening of classroom climate by about 4% of an SD.

Model 2 adds characteristics of the class: the proportion of academically gifted students, and the proportion with behavioural problems. When these variables were added the size of the independent school effect fell by roughly two-thirds (from a value of 0.356 to 0.126). This suggests that much, but not all, of the apparent effect of independent schools was due to the more favourable characteristics of pupils in classes in those schools. School climate (delinquency and violence) became completely insignificant at this stage of the modelling – to such an extent that it was removed from further models.

Both of the classroom characteristics variables were highly significant and had effects of substantial magnitude. After controlling for other factors in this model classroom climate tended to be more favourable when there were higher proportions of academically-gifted pupils. Compared to the reference category of between 1-10% of these pupils in the class, classroom climate was 0.21SD lower if there were no academically gifted pupils present and about 0.13SD higher if the class comprised more than 30% of these pupils. Classroom climate tended to be less favourable when there were higher proportions of students with behavioural problems. If the teacher stated that more than 30% of a class consisted of such students then the classroom climate score was 77% of an SD lower than classes where only 1-10% of students had behavioural problems, and more than a whole SD below that of classes containing no students with behavioural problems.

It is also worth noting that by including the characteristics of pupils in the class there was a large improvement in the proportion of variance explained, with the R² statistic in Model 2 reaching nearly 23%, a considerable increase on Model 1, where it was rather less than 5%. The proportion of variance explained increased further, to almost 32%, in Model 3 in which two teacher characteristics – self-efficacy index and years of experience were also added. On average classroom climate was about one-fifth of an SD lower for inexperienced teachers (those with 5 years or less of teaching experience) compared to the reference category of 6-10 years teaching after controlling for the other factors included in Model 3. A one SD increase in teacher self-efficacy was associated with a 29% improvement in classroom climate, after allowing for other factors, including school type and the characteristics of pupils in the class.

[TABLE 6 HERE]

The next stage in the modelling was to add further variables reflecting hypotheses 3 and 4, which concerned whether the school leadership team was consistent in applying a behaviour policy and the extent to which parents were supportive. The three variables related to school leadership used in the bivariate analysis - 'culture of shared responsibility for school issues'; whether the school had 'an effective school management team' and whether the school management team gave a 'clear vision and direction' - were added to Model 3. Because these variables were highly correlated they were added separately to the model at first and then sequentially. Results here showed that the shared responsibility variable was not statistically significant; the effective management team was significant, while the management vision variable turned out to be insignificant and wrongly signed. Hence only the effective management variable was retained among this group of variables. Moreover, the parental support variable was also insignificant. Hence the preferred specification at this stage of the modelling is shown as Model 4 (Table 6). This regression model shows that, after allowing for the influence of other factors, the classroom climate score was 0.20 SD higher if the teacher strongly agreed with the statement that there was an effective school

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⁷ By 'wrongly signed' we mean that prior expectations would lead one to suppose that a management team providing clear vision and direction would be associated with more favourable classroom climate (a positively signed relationship) whereas in fact in the multiple regression analysis, the reverse was the case – a negative relationship. However, since the relationship was not statistically significant we cannot reject the null hypothesis of no relationship at all here.

management team relative to those who merely agreed while it was 0.11 SD lower if they disagreed compared to those respondents who agreed with the statement.

The final stage was to add in further variables for CPD – whether the teacher felt that they needed CPD in behaviour management, whether they had received CPD, and the perceived effects of it if they had done so. Model 5 shows that, even after controlling for all the factors so far, those who stated that they needed CPD in managing classroom behaviour also reported substantially lower classroom climate, on average. Receiving CPD and the effects of CPD were not statistically significant. It is worth noting that the perverse negative effect of having done CPD observed in the bivariate analysis no longer occurred in this multiple regression framework where we controlled for other things, including the teacher's perceived self-efficacy. Model 6, the final preferred model, was arrived at by dropping the insignificant CPD variables. Comparing Model 6 with Model 4 it can be seen that including the need for CPD variable reduces the magnitude of the effects of the other teacher characteristic variables (although they remain statistically significant) – for example self-efficacy has a coefficient of 0.27 in Model 4 but 0.18 in Model 6. All the variables in Model 6 are statistically significant except for type of school, which was no longer significant even at the 10% level here.

DISCUSSION AND CONCLUSIONS

Our review of the literature demonstrated that different sources of evidence point to different conclusions about the nature of the disciplinary climate in classrooms in England. This is, perhaps, not so surprising given the measurement issues relevant to the comparison of evidence from different sources. Conclusions may vary according to what is the unit of observation. A survey of primary schools may yield somewhat different findings to a survey of secondary schools. It will also depend on whether the data are based on external observation (by bodies such as Ofsted) or surveying within schools. Even if we focus on the latter, there is the further issue of who is surveyed – heads, teachers or children. The design of the survey instrument, for instance the wording of the questions on classroom climate, will also have some influence on results. Given all these measurement issues, obtaining a single, definitive, precise figure on classroom disciplinary climate is unlikely – there is bound to be some variation from survey to survey. It ought, nevertheless, to be possible to arrive at a sensible conclusion as to whether poor discipline is, or is not, a serious problem in classrooms in England.

The TALIS 2013 data contain information from the perspective of teachers on the extent of disciplinary climate problems in classrooms in England. The data show that teachers in England perceive that there is considerable disruption in their classrooms. Over a fifth of the lower secondary school teachers who participated in the survey agreed or strongly agreed that it took quite a long time for students to quieten down at the start of the lesson. Some 22% agreed or strongly agreed that there was a lot of noise in their classroom. While some reports, especially from official sources, have suggested that classroom disruption is minimal in schools in England, that does not seem plausible given the results from TALIS and, indeed, from a range of other sources of evidence.

Nevertheless, when we place these results in international comparative perspective, what emerges is that, on each of the items measuring classroom climate in TALIS 2013, the results for England were somewhat better than both the all-country average and the average for nine high-performing countries. They also tended to be a good deal better than for a group of European comparators. For example, the proportion agreeing/strongly agreeing that there was a lot of disruptive noise in the class was as low as 13% in Japan, and as high as 39% in Spain and 55% in Brazil. The proportion among teachers in England, at 22%, was lower than the average for all TALIS countries, which was 26%, and also lower than averages for highperforming countries (26%) and European comparators (28%). So the TALIS evidence suggests that, in the view of teachers, there was a substantial amount of noise and disruption in lower secondary classrooms in England. But it was at, or somewhat below, the average for western European countries. This was confirmed by an examination of other international evidence from recent rounds of the PISA survey. PISA, with information obtained from questionnaires completed by pupils and headteachers provides a useful supplement to the teacher perspective of TALIS. On a range of questions about disruption in the 2009 and 2012 PISA surveys, the views of students suggested that the extent of disruption was similar, or a little better than European comparator countries. A much lower proportion of principals in England felt that disruption of classes by students hindered learning to some extent or a lot than in other European countries. These findings are particularly important given the skewed and often misleading presentation of the situation in popular media (Haydn, 2014). As well as their intrinsic interest, the results here provide quite a robust rebuttal of claims that have been advanced in the national press that pupils in England are the worst behaved in the world or the suggestion that deficits in classroom climate are particular to English schools. The policy relevance of the study, then, is that it can contribute to the grounding of policy debate on

what might be done to improve classroom climate in a more sensible, measured and well-informed way, in terms of how things actually are in English schools.

The findings also clarify some further facets of the debate. For instance, only a small proportion - less than a fifth - of the overall variation in classroom climate occurred at the school level. Most of the variation was within schools rather than between schools. In other words, there were well-behaved and less well-behaved classes in many schools in England; poor behaviour was not confined to just a small sub-set of schools. In multiple regression analyses school-level factors were only weakly related to classroom climate. For example, independent schools had high scores on classroom climate. However, this was overwhelmingly the result of the type of pupils in these schools rather than school policies, or other attributes of these schools as such. Once we controlled for pupil characteristics (proportion academically gifted in the class, and proportion with behavioural problems) the size of the independent school 'effect' fell by almost two-thirds. There was only weak evidence that school climate was related to classroom climate. A significant bivariate association between classroom climate and a particular index of school climate – specifically one measuring the extent of delinquency and violent behaviour at the school – was found but this was no longer statistically significant once other factors were controlled for in a multiple regression model. Although it has been argued that parental support for school behaviour policies is important we found no convincing evidence for this. After controlling for other factors, there were no statistically significant relationships between classroom climate and either parental involvement in the school, or the extent to which the teacher perceived that parents were supportive of the teacher.

Both characteristics of the pupils in the class, and characteristics of the teacher, were found to be significantly correlated with classroom climate in bivariate analyses and in the multiple regression models. Classroom climate tended to be more favourable when there were higher proportions of academically-gifted pupils. Conversely, classroom climate tended to be less favourable when there were higher proportions of students with behavioural problems. As for teachers, the results underscore the importance of experience. It was found that the number of years of teaching experience was strongly associated with classroom climate. There was a considerable gap, on average, between the least experienced teachers (those with 5 years or less of experience) and more experienced teachers. Teachers who regarded

themselves as more capable – had higher self-efficacy – also tended to report more favourable classroom climate, on average.

Our paper has addressed a substantial gap in the literature in this field. Although classroom climate and its influence on student attainment is a high profile issue in England, as in many countries, there has previously been little effort to use the lens of TALIS and other OECD data to provide an international comparative perspective on the issue. So what, briefly, are some of the main implications that we might draw from these new findings? We would emphasise three things. The first point worth highlighting is that, while behaviour is a significant problem in secondary schools in England, it is perhaps slightly better, on average, than in a group of countries which perform strongly on international test scores such as PISA and TIMSS. Now, the determinants of performance on these tests are complex and multifaceted (OECD, 2013). But it seems plausible to argue that, if policy-makers were looking at what was causing pupils in England to do less well on these tests than the in the very highestperforming countries, then the extent of disruptive behaviour in the classroom would not seem to be at the root of it. Secondly, the fact that there is much within-school variation in classroom climate implies that many schools have at least some classes where disruption is a problem. This underscores the complexity of the issue – it is certainly not a case of just disseminating good practice to a handful of schools where disruption is a problem. As Haydn (2014) notes, all schools have to work with initiative and ingenuity if disruptive pupil behaviour is to be addressed. And thirdly, there is the correlation between the length of time that teachers have worked in the profession and favourable classroom climate. More experienced teachers tended to report fewer disciplinary problems, even after controlling for other factors. Of course, since the TALIS data are cross-sectional we do not observe changes in the experience of individual teachers and so have to be cautious in our interpretation. Nonetheless, this finding is consistent with evidence that teachers need to develop a range of skills before they can confidently control their classrooms (Elliott, 2009). Novice teachers often report feeling under-prepared for dealing with disruptive pupils. Classroom management skills inevitably take some time to develop.

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