

‘It ain’t (only) what you do, it’s the way that you do it’: A mixed method approach to the study of inspiring teachers

Abstract

This paper draws on findings from a study of ‘inspiring’ teachers in order to illustrate the way in which the chosen mixed methods design contributed to the success of the research in addressing its research aims. The study investigated the concept of ‘inspiring’ and ‘inspirational’ teaching through recruiting a purposive sample of 17 primary and secondary school teachers in England drawn from nine schools in a single Multi-Academy Trust (MAT). The aim of the study was to integrate and synthesise evidence from a range of perspectives using multiple methods involving a combination of descriptive and numeric data, in order to increase knowledge and understanding of what it means to be ‘inspiring’ within the current educational landscape. The study fits with the ‘numbers and a narrative’ tradition reflecting the growing popularity of mixed methods (Gorard & Smith, 2006) and adopted an equal-status, sequential research design that comprised integration of multiple methods including semi-structured interviews with teachers, classroom observations including both descriptive field notes and systematic observation schedules that tapped features associated with effective practice, numeric ranking sheets for teachers and head teachers, and a student questionnaire survey that included rating scales and open-ended response questions. The findings reveal clear associations between effective and inspiring practice but also identify particular features that distinguish inspiring practitioners and their practice. Findings concerning the socio-emotional component are highlighted in particular in relation to the emphasis these teachers placed on creating positive relationships with students and a safe supportive classroom climate.

Keywords

Inspiring teachers, teacher effectiveness, mixed method research

1. Introduction

This paper provides an overview of a mixed methods research study that investigated the concept of 'inspiring' and 'inspirational teaching. Funded by the *[removed to avoid identification]*, a purposive sample of 17 primary and secondary school teachers participated in this piece of research. Head teachers from all schools in a small MAT chose as their focus of interest for the MAT's collaborative school improvement efforts the topic of 'inspiring teaching'. The Academy chain had a tradition of funding research, both external and supporting action research within its schools. The head teachers nominated practitioners in their schools that they felt demonstrated characteristics of 'inspiring' teachers in order that findings from the externally funded research study could be shared later as part of professional development programme within the *[removed to avoid identification]* academy chain (Authors, 2016a; Authors, 2016b) and to support these schools' engagement with research evidence. The main aim of the research was to study and understand good practice, with a special focus on the notion of learning from 'inspiring' classroom practitioners in the MAT with a view to sharing the findings to encourage collaboration amongst staff, and contribute to enhancing teaching and learning across the *[removed to avoid identification]*. The participating teachers, are thus a purposive sample identified as exemplars in their own schools for in some way 'inspiring' other colleagues and students. This paper provides a particular focus on the use of a mixed methods design incorporating multiple methods and highlighting points of connection and interface from different data sources, both numeric and descriptive, as a way of studying the concept of inspiring teachers and illuminating inspiring practice.

This paper begins by contextualising the study within academic and policy literature, discussing current knowledge and understanding regarding the notion of 'inspiring' teachers

and teaching, and exploring the contribution of this research within this context. Having outlined the aims and key research questions that guided the study, the majority of the paper is given to a detailed account of each method and the implementation and analysis procedures involved. It also highlights how different sources of evidence were combined and integrated through presenting and discussing the key findings arising from analyses of the different sets of data generated by the multiple methods to illustrate the processes of mixing and the ways multiple methods can be employed. The research design links methods more commonly associated with both qualitative and quantitative traditions to form a ‘third methodological movement’ (Gorard & Smith, 2006: 59) that reflects the growth of interest in mixed methods approaches (Gorard & Smith, 2006; Tashakkori & Teddlie 2003; 2010). This paper seeks to illuminate both the topic of the research and to provide deeper understanding and findings than would be the case if only numeric or descriptive data were used in isolation, so highlighting the processes involved in combining numbers with narratives (Gorard & Smith; 2006; Author, 2017).

The influence of policy and practice on inspiring teaching

Although ‘inspiring’ and ‘inspirational’ practice are not necessarily new terms in the field of classroom research they have become more commonly used in recent UK education policy over the last decade. The Department for Education (DfE) for example in outlining Teacher Standards argued teachers should, “inspire, motivate, and challenge pupils” (DfE, 2013, p.7) as part of the “minimal level of practice expected of trainees and teachers” (p.3). The Office for Standards in Education (Ofsted), the national inspection body in England responsible for monitoring schools and educational standards, has published reports that also use ‘inspiring’ or ‘inspirational’ as descriptors of excellence in relation to defining outstanding or good practice in describing teaching, environment and leadership in schools (e.g. Ofsted, 2011).

A similar emphasis is also evident in publications aimed at supporting teachers and school leaders. A number of texts seek to provide guidance and exemplify about inspiring teaching although there are variations in definitions and examples of what inspiring teaching may mean or the kinds of actions and activities that inspiring teachers undertake in their practice. For example, McGuey and Moore (2007) seek to guide teachers in terms of a route to inspiring teaching advocating teachers start with clear personal and classroom mission statements, then focussing on modelling desirable behaviours, building respectful relationships and listening to their students. Erwin (2010) similarly highlights the importance of fostering socio-emotional learning and ways to promote student self-awareness and ownership. By contrast, Harmin (2006) specifically suggests that active learning should be the main outcome of inspiring teaching. Other authors articulate the concept by using descriptions such as ‘exciting’ and ‘creative’ interchangeably with ‘inspiring’, while implying that inspiring teaching should also have a lifelong effect on students: “What is it that inspirational teachers do? In short, they plan for their pupils to be inspirational” (Ryan & Gilbert, 2001, p.5). Nonetheless, a number of authors suggest that being ‘inspiring’ may be difficult in accountability and assessment-focussed educational policy contexts such as England (e.g. Hayes, 2006). It should be noted that basis for such practitioner focussed texts and guidance is typically based on these authors’ own personal experiences as teachers and does not seem to be based on documented examples of research. It is thus more akin to the guidance on good practice provided by inspection agencies that largely rely on professional judgments observations, field visits, and vignettes to highlight what are thought to represent inspirational examples of school leadership and classroom practice. Various examples of descriptive pieces aimed at practitioners are provided by Furnham (2001; 2010), Collins (2006), and Richards (2004). Some authors attempt to provide subject-specific guidance (e.g. Blake, 2006), offering advice and ‘tips’ for teachers to try out.

Some of the main themes on inspiring teaching evident from the literature are noted below:

- common use of terms such as teaching that is in some way *exciting*, *innovative* or *creative*;
- different sources of evidence related to student outcomes to support the claim of inspiration such as promoting *student engagement* in learning, an impact in promoting *students' aspirations and self-concepts*, or fostering their subject *interest*;
- accounts or vignettes of *specific practices* that embody the notion of inspiration but that in some instances can also be viewed as exemplars describing 'effective' teaching practices.

Effective teaching and inspiring teaching: Are they related?

The word effective is often alluded to in commentaries seeking to define or illuminate inspiring teaching. The concept of effective teaching has received much greater focus in educational research than the newer interest in 'inspiring' practice and thus there is a more comprehensive evidence base to mine for teacher effectiveness than currently exists for inspiring teaching. Reviews of effective teaching have often drawn links to the role of teachers in shaping student outcomes, and identified characteristics or correlates of effectiveness that support better outcomes (see Darling-Hammond & Youngs, 2002; Authors, 2007a; Muijs, Kyriakides, van der Werf, Creemers, Timperley & Earl, 2014, for example). Nonetheless, ways to measure teacher effectiveness and to conceptualise effective teaching remain challenging and contested as noted by Author (2013) and Muijs et al (2014), who consider the role of student outcomes, teacher views and perceptions, the role of systematic and other observations and students' views amongst other sources. Educational effectiveness research (EER) in general, and teacher effectiveness research (TER) in particular suggest that

promoting positive student outcomes (academic and socio-emotional) is an important prerequisite for effective teaching. Author (1996) outlines three questions for studying variations in school and teacher effectiveness:

- The ‘What’ of effectiveness (which outcomes)?
- The ‘When’ of effectiveness (time period)? and
- The ‘Whom’ of effectiveness (which student groups, including equity concerns)?

These three questions draw attention to the priorities and goals of education for students, the concept of stability and change over time, and the notion of differential effectiveness (i.e. equitable experiences and outcomes for sub-groups of students by categories such as ethnicity, gender, socio-economic status). These questions link well with the concept of focussing on within school variation in studying school and teacher effectiveness and the notion that schools can improve by tapping into, and learning from, examples of existing effective practice and so reducing such within school variation.

As is widely recognised, most research on teacher effectiveness has focussed on academic outcomes (Creemers, 1999). Nonetheless, in the last two decades researchers have acknowledged the importance of exploring school and teacher effects for other important student outcomes such as attitudes, behaviour, engagement, motivation and self-concept (Author, 2010a; Author, 2016a; Author, 2013; Little, Goe, & Bell, 2009; Author, 1988; Reynolds, 1995; Author, 1996)

Definitions of teacher effectiveness typically seek to measure teacher/class effects on student progress in some way, while controlling for students’ prior attainment and other baseline measures using statistical models. In addition, due to findings that teaching approaches and

strategies typically vary across different school contexts studies that explore the role of school context have often included case studies and argued for context specificity to be included in definitions (Teddle & Stringfield, 1993; Authors, 2006b; Authors, 2014; Luyten & Snijders, 1996; Luyten, 1995; Muijs, Harris, Chapman, Stoll & Russ, 2004; Author, 2010a). Observational studies especially using systematic instruments developed in international collaborations have also highlighted variations in teacher behaviours and classroom processes and their associations with student outcomes (Campbell et al., 2004; Author, 2013; Muijs et al 2014).

Researchers exploring variations in teachers' classroom practice are making greater use of mixed methods and multiple sources of evidence to investigate effective teaching practice (Authors, 2011; Authors, 2007b). Methods that can provide numeric or descriptive evidence about teachers' practices and behaviours include interviews, observations (both unstructured and systematic), student attainment in various tests or examinations and questionnaire surveys of students and teachers (Author, 2013; Little, Goe & Bell, 2009).

A few studies have sought to investigate and articulate teachers' personal constructs of effective practice drawing on repertory grid approaches (Authors, 2014) to supplement traditional qualitative interviews. The earlier *[removed to avoid identification]* study in England produced a number of insights and findings of relevance to the present study of inspiring practice. It also used a mixed methods design and combined numeric and descriptive evidence from two systematic lesson observation schedules (ISTOF¹ and QoT²), teacher interviews, repertory grid techniques to tap teachers' personal constructs, student surveys, and qualitative field notes to provide a detailed analysis of the constituents of effective teaching practice in England. A number of key characteristics revealed by the

[removed to avoid identification] research are displayed in Figure 1 below (Authors, 2008; Authors, 2011; Authors, 2016a).

[INSERT FIGURE 1 ABOUT HERE]

While a study of the literature suggests there may be associations between the definitions and key characteristics of inspiring and effective practice, the literature also points to aspects that differ. For example, although effective teaching is often linked to measured effects on students' academic outcomes, the word 'inspiring' is broader and more diffuse in meaning than the narrower term of effectiveness and less often directly linked to measured student outcomes. Further exploration is needed to provide robust evidence on what it means for a teacher to be inspiring and for a student to be inspired and this paper provides a detailed analysis of the methodology used in a recent study that sought to provide such an exploration using a combination of both numeric and descriptive data.

A definition and conceptualisation of inspiring teachers

As noted earlier in the introduction to this paper, definitions and approaches to defining and measuring inspiration and inspiring teaching differ in the existing literature and there is a lack of consistency and clarity because the area is relatively new and there have been few empirical investigations. The phrase 'stimulating influence' has been employed by van der Zee (2011) in research focussing on Religious Education (RE) teachers that notes "social virtues, knowledge, insight, spirituality and a sense of transcendence" (p.21) as relevant student outcomes for inspiring teachers in this subject context. The van der Zee's (2011) research was based on a questionnaire for students but due to the particular subject specific focus the findings may not apply to other subject specialists or age groups. Other definitions,

by contrast, may apply to a range of subjects by focussing on broader student outcomes such as the associated concepts of student engagement (e.g. Bryson & Hand, 2007) or motivation (e.g. Bowman, 2007).

Bryan, Glynn and Kittleson (2011) also adopted multiple methods to study inspiring practice including student questionnaires and essays plus some interviews in a study of science teaching. Their findings also drew attention to student motivation, and in addition covered student self-efficacy and self-determination. Their results indicated all three were positively associated with student achievement. Furthermore, it was argued that inspiring teachers fostered positive student aspirations for future study, as well as current effort and engagement. Research on trainee teachers' has revealed that those who had come across inspiring teachers in their own past school careers as students were likely to report this as an influence on their motivation to enter teacher training themselves (Santolini, 2009), suggesting such inspiration from teachers can shape students' later career courses.

We identified few examples of past research that adopted a 'grounded approach' to generate findings whereby a range of data were collected, interrogated and combined to enable new understandings of what it means to be an inspiring teacher to emerge. Darlington (2012) used a dialogic approach based on analysing teacher and student perspectives in relation to teaching in science lessons. Analyses by Burke and Nierenberg (1998) explored trainee teachers' perceptions and concluded that being caring, positive and dedicated were adjectives that described inspiring practitioners, highlighting the socio-emotional role of teachers. Lamb and Wedell (2013) adopted case studies of inspiring teachers to provide grounded findings in the specific contexts of teaching in China and Indonesia.

In a small scale enquiry, Hobbs (2012) drew attention to other teacher factors, including teacher knowledge, identity and passion. These link with some of the points made in the non-empirical literature on inspiring teaching reviewed earlier in this paper. McGonigal (2004) questions whether different sorts of teachers (in terms of personality and methods) might prove to be more or less inspiring for certain student, and whether the kinds of memorable experiences provided by inspiring teachers may help students' internalize their own learning, but no empirical findings on this were generated in the McGonigal study.

Based on our review of literature we proposed a framework to guide our research on a purposive sample of exemplary inspiring practitioners that focuses on three aspects:

- positive student outcomes (such as motivation, self-efficacy, aspiration, achievement), in different time frames (both long and short term effects),
- particular teacher behaviours and practices,
- teacher characteristics (e.g. personality traits, knowledge, and motivation), and relationships (heavily emphasized in the non-empirical literature).

2. Research Design: the use of a mixed methods design and multiple methods

The project utilized a pragmatic-constructivist approach and the mixed methods design enabled the participants to be in control of the way their experiences are framed and articulated. Mixed methods research has rapidly increased in popularity over the past 15 years as an alternative to a purely qualitative or quantitative piece of research (Burke & Onwuegbuzie, 2004; Gorard & Smith, 2006; Authors, 2014; Tashakkori & Teddlie, 2003; 2010; Author, 2010b; Author, 2017). This study aimed to provide new evidence regarding: i) inspiring teachers as individuals and collectively; and, ii) inspiring teaching as a practice

using a number of perspectives in order to increase knowledge and understanding of these concepts. At the same time, the research questions central to this study demanded the development of an approach which would satisfy the need for both statistical and in-depth qualitative data. As a result, the team decided to opt for an “equal status mixed-methods design” (Tashakkori & Teddlie, 1998: 43-5) building on prior experience of the *[removed to avoid identification]* study (Authors, 2008; Authors, 2011) in order to generate a variety of numeric and descriptive data ‘to address the complex and potentially interrelated issues and concerns, and to provide detailed, holistic and methodologically robust’ (Authors, 2011: 107) accounts of inspirational teachers. This exemplifies the third methodological approach linking numbers and narratives (Gorard & Smith, 2006; Gorard & Taylor, 2004) in a small scale exploratory investigation of classroom practice.

Thus, rather than being constrained by a single technique, approach or method, the study utilized a combination of methods, allowing deeper insight to be gained of the influencing factors associated with inspiring and effective teachers. This approach also enabled the identification of ‘...the relationships between (a) observed practice; and (b) teacher, head teacher, and pupil perceptions’ (Authors, 2011: 106). Thus, although case studies of participating teachers were at the center of the study, they comprised four sources of numeric and descriptive data; semi-structured interviews, ranking sheets, questionnaire surveys, and lesson observations.

Methods of data collection (and analytical techniques) were selected on a *fitness for purpose* approach which Hammersley (1996) described as “methodological eclecticism”. This approach not only allowed for triangulation, but also provided a more comprehensive analysis, interpretation and appreciation of the complex research issues under study than if

relying on a single paradigm or approach and links with a pragmatist philosophical perspective (Tashakkori & Teddlie, 2003). Each method was employed equally, meaning that one dataset was not favored over another. The different strands of the research were gathered and analyzed to provide a coherent and full picture. For example, the quantitative classroom observation schedules provided only limited data on context, whereas the descriptive field notes provide greater understanding of contextual aspects. Moreover, the semi-structured interview enables the participant teachers to expand on issues relating to the particular school and classroom context, in effect prioritizing and contextualizing them further.

One potential disadvantage of this approach is that the various data collection elements could be designed and carried out in isolation and only combined in the latter stages of the research. However, in this research study we aimed to integrate the different perspectives and forms of data iteratively throughout the research process (Tashakkori & Teddlie, 2003). Thus, findings from the initial data collection stages were considered when administering the questionnaire survey to students, and the analyses from these were used when reanalyzing and interpreting the combined datasets. Furthermore, findings from the empirical analyses conducted as part of this study interacted 'with critical surveys of appropriate literature to produce new theoretical developments which themselves added to understandings of inspiring teachers' (Authors, 2006a: 112).

The purposive sample of teachers nominated were identified by head teachers in the nine schools in the MAT as demonstrating best practice and considered as 'inspiring' by their colleagues. A total of 28 teachers were identified by the head teachers in the MAT, but due to time constraints and individual teachers' circumstances (e.g. illness/maternity leave) and time tables, it was only practical to include 17 teachers in the field work phase. In the smaller

primary schools typically only one teacher was studied but, in the secondary schools, two nominated teachers were usually included and, in one school, three. The team sought to include teachers with different subject specialisms, both males and females and teachers with different years of experience in recruiting participants from the longer list nominated by head teachers.

Three research questions guided the direction of the study: i) What do inspiring teachers say about their own practice and that of other teachers that have influenced them? ii) What do inspiring teachers do in their classrooms? iii) What are their students' views and experiences?

Methods

To fully explore the notion of ‘inspiring’ teachers, the research adopted a mixed methods design to investigate and identify ‘features of good practice’ as well as to ‘understand these exemplary teachers’ views and conceptions of their work and the perspectives of their students’ (Authors, 2016a: 16).

Sample

A total of 28 teachers were identified by the head teachers in the MAT that initiated this study as inspirational. Due to time constraints and individual teachers’ circumstances (e.g. illness/maternity leave/job changes) and time tables, it was only practical to include 17 teachers in the field work phase. On average, approximately two teachers from each of the nine schools were involved but in some schools only one and in others three teachers were available and willing to participate. The team sought to include nominated teachers with different subject specialisms in the secondary school sample, both males and females and teachers with different years of experience in recruiting participants from the longer list

nominated by head teachers. The research team collected data from a total of 17 teachers who worked in nine *[removed to avoid identification]* schools. Of the 17 teachers, seven taught in primary schools and ten were secondary teachers (Table 1). Thirteen teachers were female and four were male. As shown in Table 1, all of the male participants worked in secondary schools and the distribution by subject area is reported in Table 2. Although nominated by their head teachers for the study, all teachers were voluntary participants and, as such, anonymity and confidentiality were assured in line with the project's ethical protocols.

[INSERT TABLE 1 ABOUT HERE]

[INSERT TABLE 2 ABOUT HERE]

The curriculum subject areas covered by participants varied widely, as did the year groups in which teachers taught (Table 3).

[INSERT TABLE 3 ABOUT HERE]

Table 4 indicates the career phase (based on years of experience) of teachers at the time of the study. Of the 17 participants, 11 were early- and mid-career teachers, and 12 had worked in more than one school. A small number (n=4) had previously worked in professions unrelated to teaching.

[INSERT TABLE 4 ABOUT HERE]

Most participants (14 out of 17) stated that they had responsibilities in addition to their teaching role, including 'Key Stage manager, subject department heads, assistant head teacher, deputy head teacher and advanced skills teacher' (Authors, 2016a: 160). Thus, the sample included middle and senior leaders, as well as teachers without specific responsibilities. All 17 teachers were interviewed and observed teaching a full lesson on at least one occasion (and 11 teachers were observed teaching two lessons). All but one completed a ranking sheet.

Data collection tools

The main focus of this study was on the 'inspiring' teachers nominated by the schools. However, in addition to collecting data from participant teachers, data were also generated via tools administered to the head teachers and students taught in a class from each teacher. Instruments utilised for this research had been designed, developed 'and/or validated in the English context' (Authors, 2016a: 17) during a previous *[removed to avoid identification]* study of *[removed to avoid identification]* (Authors, 2014). These included:

- Semi-structured interviews – face-to-face interviews were conducted to collect the views, opinions and perceptions of teachers;
- Classroom systematic observation – two international observational instruments were administered in each classroom to explore teacher behaviours and effectiveness;
- Classroom qualitative field notes – these were collected in each classroom giving a rich description of the lessons under observation;
- Ranking sheets – these were emailed to teachers and head teachers to explore the relative importance assigned to a number of teacher attributes;
- Student survey – this questionnaire was administered by the research team to students taught by participant teachers to collect their perceptions and views.

Table 5 indicates the number of returns for each instrument. Due to time constraints and the logistics of field work it was not always possible to administer the student surveys to a class taught by each teacher (student surveys were collected for only 11 of the 17 teachers and, thus, the student data set does not cover some teachers, a limitation of the study).

[INSERT TABLE 5 ABOUT HERE]

Each research tool and analytical technique is described fully in later sections of the paper.

Analytical approach

The integration of analyses took place on an ongoing and interactive basis throughout the stages of analysis. For example, themes generated for the initial organization of qualitative coding of classroom observation descriptive notes were explored in relation to quantitative items from the numeric ratings of the observation tools. Moreover, the processes of ‘qualitizing’ and ‘quantitizing’ the numeric and the descriptive data were also adopted:

‘qualitative analysis also involved various amounts of ‘quantizing’ (for the observation data, this mainly involved an ordering of codes and themes according to percent coverage of sources, and for student survey open responses, frequencies were also calculated). Quantitative data was also ‘qualitized’, though the process of finding and describing a discrete set of dimensions or components which could then be compared to the qualitative themes (Authors, 2016a: 170).

With regard to the classroom observations, ‘qualitative and quantitative findings were compared to see how the results aligned as a form of triangulation’ (ibid), as well as to offer explanation or elaboration of certain elements of the statistical findings.

Piloting

All research tools were piloted prior to data collection in schools. This was done in three distinct stages:

- i) Members of the research team trained in the administration of the two numeric classroom observation tool by viewing videos of a variety of lessons from teachers not included in the nominations for the Inspiring teacher study, both primary and secondary. Data collected was compared to gain inter-rater reliability (Tashakkori & Teddlie, 1998);
- ii) The observation, interview and ranking tools were trialled in one of the participant schools with a pilot sample of exemplary teachers (also nominated by head teachers but not included in the 17 involved in the main data collection phase);
- iii) The research team discussed any issues that had arisen as part of the piloting process. Appropriate revisions were made to instruments where necessary.

Ethical considerations

The mixed methods research design adopted for this study needed to address a number of ethical issues. Adhering to the guidelines of the British Educational Research Association (BERA, 2011), protecting the welfare of the research participants was a key consideration, alongside the importance of ensuring participants were in a position to give fully informed consent³. In order to achieve this, the aims of the study were conveyed to all participating teachers, head teachers and students, as well as the time commitment that would be involved

for each participant, by the research team whilst on an initial visit to the schools. Issues of confidentiality, during and after the research process, and anonymization of names of schools and all participants were also discussed. Identification codes were assigned to all participants at the beginning of the research to protect the identities of individuals and ensure non-traceability, an important aspect of rapport building which, in turn, facilitated open discussion of ethical and other issues. Only after these ethical discussions had taken place were practitioners and students asked if they still wanted to be involved in the study. Each participant had the right to refuse to take part, and it was acknowledged that they could withdraw their participation from the study at any time, without explanation.

The paper is divided into five further sections. The first four outline the main data collection methods (interviews, observations, questionnaire survey) employed by the study and the associated analytical techniques adopted. In each case, key findings that emerged from the data generated have been used to illustrate how the method facilitated the collection of data relevant to the research questions. Where thematic analysis was carried out, a particular theme (relationships with students) has been used for illustrative purposes in order to show the advantages of mixed methods research in triangulating different forms (and sources) of data. The final section describes the data integration process, highlighting the advantages and limitations of this mixed method study.

3. Semi-structured interviews: Identifying characteristics of inspiring teachers

The views, perceptions and opinions of teachers were collected via a semi-structured interview schedule for a total of 17 teachers nominated as inspirational by their school's head teacher. The duration of these interviews was between 25 and 60 minutes. Each interview

was digitally recorded and transcribed before being stored securely as anonymised files with individual unique identifiers. Following the interviews, a coding frame was developed which contained organizational themes for initial analysis. However, this was later expanded and elaborated upon, as additional themes were identified during the coding process. In order to ensure inter-reliability between researchers and enhance validity of findings through triangulation, a subsample of interviews were coded simultaneously by different members of the team (Patton, 1999) and the codes compared. NVivo (a computer assisted qualitative data analysis software package) was used to organise, manage and analyse the interview data (Bazeley & Jackson, 2013), ‘using content analytic methods’ (Authors, 2016a: 166). In addition, ‘teacher attributes’ (ibid), such as school phase, gender and career phase were later added to NVivo to create clusters through which to interrogate the data across groups.

Characteristics of inspiring teachers

As part of the interview, teachers in our exemplary sample were asked if they had experienced a teacher who could be described as ‘inspiring’. This was done to allow teachers to talk about other examples in addition to their own. It also reflected a finding noted in the literature review that personal experience of ‘inspiring teaching’ may influence career choices. In total, 16 of the 17 participants were able to give an example. Over half (9 out of 17) of participants spoke about a teacher who had taught them at school; many identifying a practitioner who had either taught the same subjects as themselves, or similar year groups.

“I have teachers that I remember from my own school days, but not necessarily because of things that they did within lessons, so it might just have been that they were the sort of person that you could approach generally, not just about the subject. Somebody that could support you but also somebody for whom, as a student, you

know that that teacher really does have your best interest, and would do everything in their power to do right by you, be there for you, but accepts as well that your needs are not the same as that [of another] student's needs, and that student needs" (Female, Secondary school, 11-15 Years of experience).

In addition, nearly half (8 of the 17 participants) mentioned colleagues (teachers and head teachers) at their previous or current schools as being inspirational. Additional examples that were less commonly given were initial teacher training school-based mentors, and friends and family members who worked as teachers. The reasons given by interviewees for why they defined these teachers as inspirational were also explored. One of the characteristics most frequently mentioned was *Positive relationships with students* (n=11), and findings relating to this feature are discussed in more detail below in order to illustrate the nature of the data collected.

Positive relationships with students

Participants felt strongly that those that had been identified as 'inspiring' for the research and those they had identified as influential in their past experience were teachers who prioritised the building and maintenance of positive relationships with students:

"I still love that every new child you have, expands that relationship, and getting to know them, and to know what's special about them, and seeing them grow, just being aware. So I think that inspiring teachers must have great relationships with their children, and they must understand their children, and be able to respond to their children's needs." (Female, Primary school, 16-20 Years of experience)

This position was linked strongly for many with the time they spent understanding and knowing students, both as classroom learners and as individuals. Coupled with this was a teacher's awareness of students' domestic situations, any issues in the family, and the social context:

"The getting to know the children and getting to know them individually, and actually knowing where they are coming from but also where they need to go next, it's about that because you can inspire them in lots of different ways but you need to know where they need to go." (Female, Primary school, 6-10 Years of experience)

"You have to know the students who you are teaching, and I think people say that that's a given, but I think it's going beyond learning about how they learn, it's learning about them and, you know, their sense of humour". (Male, Secondary school, 0-5 Years of experience)

Teachers stated that building a relationship with students takes time and effort and is a dynamic process that changes over time, is complex and can be difficult sometimes. They felt that there is a vital transition phase when students start to work with a new teacher, and vice versa:

"I think the relationships really are important. But you can't start to build that quite early on, it's difficult because when you're first new somewhere the kids are much more standoffish, they're testing you, so it's more difficult". (Female, Secondary school, 11-15 Years of experience)

“I think at the start with them there were a few more barriers, then they got to know me, and they got to understand where I’m coming from and then sort of throughout the year that sort of broken away, which I think means that the relationship with me and the group is a lot better than it was at the start, but the start has to happen in order to get there, at the same time”. (Male, Secondary school, 0-5 Years of experience)

A crucial aspect when developing positive relationships with students, as identified by participants, is that mutual respect is promoted by both parties, and this was linked with the notion of being consistent and was also felt to help inspire children to want to learn:

“I think respect, understanding of children, and by that I mean understanding that they are very intelligent emotionally. I think those factors will influence how well children learn, I think that inspires them to learn, because they want to learn, you’ve got to get them to want to learn from you, haven’t you?” (Female, Primary school, 0-5 Years of experience)

“...so they need to get to know me as a teacher and I need to get to know them, and there is that mutual respect, I respect them as human beings, they respect me and they know very clearly that I’m going to be consistent” (Female, Primary school, 16-20 Years of experience)

As with the teachers they had found to be inspiring in the past, most participant teachers in our study perceived they had positive relationships with their students and reported that developing and maintaining relationships with their students was a priority for their own

effective classroom practice. Participants, regardless of gender, career phase or school sector, stated that positive student relationships were key to their own identity and sense of self-efficacy as a teacher. The importance of liking students and teaching was also evident in the interviews:

“I think children then pick up on the fact that I like them. It’s really as simple as that. They know when a teacher is just doing it because that’s their job. They know that I do it because I like spending time with them, so they respond accordingly” (Female, Secondary school, 6-10 Years of experience)

“I think I have quite a good relationship with the students that are in our school. I think, on the whole, I’ve got a positive sort of ... they see me as quite young still, so they can associate with that, I think that that helps a lot of them, it helps to be a male, and I think a lot of the boys who maybe, across the school, find themselves disillusioned with education, find it a lot easier to sort of associate with myself and they see me as a role model, and I think at times I can sort of empathise with those a little bit more, and when they come to me or they want to talk about things like where they’re coming from...” (Male, Secondary school, 0-5 Years of experience)

However, a few of the exemplary teachers also emphasised the importance of establishing boundaries in their relationships with students. This may reflect concerns about professional appropriateness (e.g. in relation to social media), or values surrounding the importance of an academic emphasis in classroom interactions:

“Teachers often make that mistake: “I want to be your friend”. But I tell the kids that: “You’re not my friends, I want nothing to do with them outside school, I don’t do Facebook, I don’t do anything else like that”, even when they’ve left. Because I think that is sometimes just stepping over the mark” (Male, Secondary school, 6-10 Years of experience)

“I’m not interested in being the sort of teacher that they bring their problems to, I think we’ve got excellent people in the school that are left to that, and I think that it could really get in the way of learning, when teachers become concern with becoming someone all opened up to about their problems, that’s not what I’m here for” (Female, Secondary school, 6-10 Years of experience)

Data collected via the semi-structured interviews identified a number of important characteristics of inspiring teaching (see Authors, 2016b, for further exploration). Although *enthusiasm* and *positive relationships with students* were mentioned as important by most teachers, other characteristics mentioned less often included *flexibility*, *relevant teaching*, *safe and stimulating classroom climate*, *positive classroom management*, *reflectiveness* and *innovative teaching*, all of which were used to inform the subsequent methods utilised as part of the study.

Key influences on inspiring teachers

In addition to identifying the main characteristics of inspiring teaching using semi-structured interviews also allowed teachers to speak about some of the factors that they believed were key influences on their abilities as practitioners, and these show how inspiring practice may be shaped by contextual and other factors.

Career aspirations

Many of the participant teachers already had additional (either middle or senior leadership) roles within the school. In spite of this, the majority (12 out of 17) of interviewees reported that they preferred to remain in a position where class teaching was their primary role as this was where they felt confident, comfortable and efficacious. For these teachers, teaching and learning was central to their role and indeed their identity as a teacher. The leadership positions adopted by a number of participants had resulted in reduced hours in the classroom in order to accommodate additional responsibilities in the school, but this often meant that, whilst appreciating the value of their leadership roles, they missed working as much as they would like with students in their teaching role. Conversely, a small number of participants felt that their leadership positions offered an opportunity to develop ideas and have an impact on the future of the school. For these teachers, especially male teachers in the sample, this created a tension between ‘their desire to remain in the classroom and career development to achieve better working conditions’ (Authors, 2016a: 146). This had led a few teachers to consider applying for jobs in other schools with the aim of enhancing their work experience, progress their careers, and have the opportunity to influence other settings. These teachers saw their future careers linked to leadership, while others indicated they were happiest and most fulfilled in their prime role as teachers or teacher leaders.

Job satisfaction, motivation and commitment

These aspects also formed part of the interviews with teachers, the majority of whom stated that their current level of motivation for teaching was high, as was their self-perception of their own ability to sustain engagement and commitment to the profession. Nonetheless, there was one participant who had become disillusioned with the job largely due to dissatisfaction

and frustration with the impact of many external policy changes. When analysing responses across the whole sample, those who taught in primary schools generally conveyed higher levels of motivation than secondary school teachers, but all interviewees reported satisfaction when discussing elements of their practice involving students. Unsurprisingly, teachers reported that their sense of emotional wellbeing and motivation at work could be affected, positively and negatively, by events in their personal and professional lives. Factors associated with negative impact included increasing workload, adapting to additional or new roles, pressures from external and/or governmental sources relating to assessment of students and teachers, reduced school support, poor student behaviour, poor personal health, and other personal or family factors.

The impact of external policy agendas

Most of the participants in the study held strong opinions regarding the recent changes to the national curriculum, assessments and examinations occurring in recent years (2013-2015). Teachers felt particularly negative about the changes because they were felt to be ‘highly political, produced great confusion and work overload, and lacked clarity’ (Authors, 2016a: 35). It was seen to be shifting the focus from student engagement and innovative teaching to further pressure on targets, tests and examination results. The perceived impact of this on participating teachers was that they had to commit more time to work, as well as re-develop and plan lessons and resources, and replace expensive textbooks and materials due to changes in the national curriculum and associated assessments and public examinations and new requirements, such as Progress 8 in secondary schools, that were being introduced.

School factors affecting teacher practice

A key factor in sustaining their own job satisfaction, motivation and commitment, as noted in interviews by participating teachers, was a supportive school culture. This was further defined ‘as the quality of leadership, relationships with colleagues, relevant opportunities for continuing professional development and shared behaviour management policy’ (Authors, 2016a: 35), which were reported to be crucial features in the professional lives of teachers, influencing classroom practice and their sense of self-efficacy.

Developmental needs

When asked about future developmental needs, interviewees identified a number of diverse areas. Most commonly mentioned in relation to improvement were subject knowledge, differentiation, and computing skills. Skills relating to pedagogy were also voiced, such as lesson planning, assessment, use of outdoor learning, student-led learning, classroom management, and marking. All teachers in the sample showed a strong interest in continuing professional learning, and often it was connected to working or collaborating with colleagues.

4. Repertory Group Grid: The relative importance of different characteristics

One of the key features of this study was the exploration ‘of the relative importance that teachers and head teachers in the study assigned to different teacher attributes’ (Authors, 2016a: 38). In order to provide data triangulation, all of the participating teachers and the head teachers, were invited to complete a structured ranking sheet based on constructs of inspiring and effective teachers which originally emerged from analysis of a repertory grid interview conducted as part of the *[removed to avoid identification]* project (Authors, 2014). There were 17 constructs in total and participants in this study were asked to rank them in order of priority to them⁴, with no equal rankings allowed. This tool expected participants to

choose and prioritise different aspects of practice, all of which will have a level of importance to them. Numeric data from the ranking sheets were inputted into Excel, and frequency and descriptive analyses were conducted using SPSS. In addition to this, mean ratings of participant teachers and head teachers were compared as were mean ratings between subgroups of teachers based on school sector (primary/secondary). The response rate for this instrument was 94 per cent (16 out of 17) for teachers and 89 per cent (8 out of 9) for head teachers. Figure 2 shows the constructs ordered by number of times each was selected as one of three most important teacher attributes by teachers.

[INSERT FIGURE 2 ABOUT HERE]

In accord with the interview findings, the constructs – *enthusiasm for teaching, positive relationships with children, high levels of motivation and commitment and confidence in the classroom* – were identified as key aspects of inspirational and effective teaching by participant teachers in this ranking process. This suggests that it is the socio-emotional attributes associated with teaching (i.e. how practitioners feel about the profession and their relationships with children) that are prioritised by this group of exemplary teachers. Conversely, constructs such as *having many years of teaching experience, developing good collegiality within the school and having a sense of vocation* were ranked as least important, which again reflects findings from the teacher interviews⁵.

Rankings from the head teachers were also analysed with the intention of identifying the degree of dis/agreement between their priorities and those of the teachers. Analysis revealed a high level of similarity between the two datasets, particularly in relation to the constructs identified as most and least important, suggesting that the participant teachers and head

teachers form a fairly homogeneous population when considering 'their constructs of the relative importance of attributes of inspiring and effective teaching (Authors, 2016a: 38). Like teachers, the head teachers frequently identified the constructs - *having enthusiasm for teaching* and *positive relationships with children* - as most important in terms of inspiring teaching, but they did assign higher relevance to the construct *understanding the needs of individual children*. As with the teacher participants, *good collegiality within the school* and *years of teaching experience* were also allocated a relatively lower priority by head teachers, compared to other constructs (Figure 3).

[INSERT FIGURE 3 ABOUT HERE]

Differences between groups

As part of the analysis process, mean rank scores were calculated separately for participating teachers and head teachers. When priority given to each construct by teachers is compared, there is a high level of similarity in the ordering of the constructs by both groups (Figure 4).

[INSERT FIGURE 4 ABOUT HERE]

Nonetheless, there are a few constructs for which the difference in ranking for teachers and head teacher is larger. Where Hedge's⁶ g is equal or higher than 0.8, the extent of difference between the mean rank score of teachers and head teachers is said to be large. For example, a difference was identified for the construct *having confidence in the classroom*, which was ranked higher by participating teachers ($M = 5.69$) than by head teachers ($M = 8.75$). Likewise, the construct *being open to new ideas* was ranked higher by teachers ($M = 8.75$) than head teachers ($M = 12.13$). On the other hand, *understanding the needs of children* and

having a sense of vocation were ranked a higher priority by head teachers ($M = 3.50$, $M = 9.25$, respectively) compared to teachers ($M = 7.50$, $M = 13.27$, respectively).

Differences by school sector

In spite of there being general agreement when analysing the mean rank scores by primary and secondary school sector, some inconsistencies were identified in constructs that were given a lower ranking by teachers (Figure 5).

[INSERT FIGURE 5 ABOUT HERE]

For example, differences were found for *planning lessons thoroughly* with secondary teachers rating this construct as a higher priority ($M = 8.00$) compared to primary teachers ($M = 12.43$) and *good lesson organisation* which was given substantially higher relevance for secondary teachers ($M = 7.44$) than their primary counterparts ($M = 11.57$).

Differences by teacher gender

Similar ratings were found between male and female participant teachers for the majority of constructs (Figure 6). Yet, there were two constructs where the mean ranking varied substantially by gender; *high levels of motivation/commitment*, with female teachers rating this as more important ($M = 5.25$) compared to male teachers ($M = 8.75$), and *ability to be flexible/adapt practice*, ranked as a higher priority by female teachers ($M = 7.58$) than male teachers ($M = 11.00$). Given the small and purposive sample this finding is interpreted with some caution but it points to possible differences for future research to explore.

[INSERT FIGURE 6 ABOUT HERE]

Differences by career phase

Two groups of participant teachers were created according to career phase, based on years of teaching experience. These were earlier career phases (up to seven years) and mid-career phases (eight-23 years)⁷. Figure 7 indicates that similar levels of priority were given to most of the constructs for both career phase groups. There were, however, two constructs where differences were seen; *good behaviour/discipline management* was ranked as a lower priority by early-career teachers ($M = 10.29$) compared to mid-career participants ($M = 6.44$), and *good classroom management skills* was given less relevance by the early career group ($M = 9.43$) than by mid-career teachers ($M = 7.00$). This finding suggests that the more experienced practitioners feel that maintaining behaviour and discipline is more important in terms of being a feature linked to inspiring practice.

[INSERT FIGURE 7 ABOUT HERE]

In summary, there was some difference in the constructs prioritised by the sample of teachers according to school sector, gender and career phase. However, it is important to note that these results are based on a small, non-random selection of teachers and head teachers in one MAT so that it is not appropriate to generalise these findings to practitioners in other settings.

5. Classroom Observations: Identifying features of ‘inspiring’ practice

This section reports on the protocols adopted for both the systematic numeric and the descriptive field notes collected in the lesson observations of classroom activity and behaviour of inspiring teachers.

Field notes observation findings: Descriptive data

The narrative descriptive aspect of the classroom observations involved ‘rich descriptive field notes to describe the lesson, which included detail on the structure, organization, and flow of the lesson, nature of lesson activities, interactions between students and teachers, classroom climate and comments on the teachers’ persona’ (Authors, 2016a: 164). During each of the observed lessons, narrative field notes were recorded by each researcher which were guided by the use of a semi-structured observation agenda, initially developed as part the *[removed to avoid identification]* study (Authors, 2008). The agenda included prompts regarding teachers’ relationships with students and lesson structure. However, it was not meant to be restrictive and members of the research team were also encouraged to record additional aspects of teachers’ practice. These field notes of observed lessons facilitated the insight into participating teachers’ classroom practice, allowing specific focus on the dynamics of the lesson, teaching and learning practices, teaching behaviours, the detail of which could not be gathered via the systematic observation instruments that collected numeric data. All those teachers who had participated in the interviews were also observed and, in the majority of cases, the interview was actually preceded by at least one observation of practice. This was a deliberate ordering of data collection so that the observed lesson could be referred to during the subsequent interviews with teachers. However, in a small number of instances, this was not possible due to time restrictions. A total of 28 full lessons (often double lessons) were observed, and for some teachers the timetables allowed two lessons were observed on the same or a subsequent day (11 teachers were observed twice).

The field notes were transcribed by the researcher who had observed the lesson, and files were securely stored using unique, anonymised identifiers which were linked to the

corresponding interview files. Several levels of qualitative coding were carried out on these data which included:

1. Initial coding – based on the categories created as part of the observation schedule;
2. Fine-grained coding – to identify further details relating to the classroom practices, ‘interactions, behaviours, and characteristics of teachers, students, activities, and classrooms’ (Authors, 2016a: 167);
3. Final stage – coding categories were ‘regrouped’ to form overarching themes and additional sub-categories within themes. At this point, teacher attributes such as gender, school sector and career phase were added (as for the interviews), which enabled the team to perform a similar analytical strategy, exploring trends and patterns across and within the qualitative datasets. Again, a number of key issues emerged from the qualitative analyses of the descriptive field note observation data (Figure 8) but, as already mentioned, the theme of relationships/interactions will be used to illustrate the nature of the data collected.

[INSERT FIGURE 8 ABOUT HERE]

Relationships and interactions

Positive relationships with students were identified as critical to effective practice from the analysis of interview data, and this analysis strongly supported that view. One way in which this was demonstrated was through the high expectations teachers expressed for their students. For example, participant teachers were observed using encouraging feedback to individual students and setting targets aimed at helping individual students to progress to the next level of work. Teachers also clearly expressed their expectations regarding the

completion of a specific task, especially if it was challenging, and most teachers observed used further questioning techniques in order to help students extend their thinking.

As the teacher circulates to various groups working on a patterning activity, a student claims to have finished early. The teacher glances at his work, and then says, "So my challenge for you then is, can you predict the number of ways for 2 by 6 or 2 by 9 or 2 by 5?"

Female teacher, 6-10 years' experience - Age group/subject: Key Stage 3 (Maths)

Part of developing positive relationships was creating spaces for students where they could feel confident about contributing to discussion and also making mistakes. Many examples of supportive formative feedback from both teachers and students were noted that reflected this secure environment.

"Safe environment to make mistakes, teacher quashes laughing at peers immediately"

(Observed Key Stage 3 Maths lesson, Male teacher, 6-10 years' experience)

"Students are not afraid of making mistakes"

(Observed Key Stage 4 Modern Foreign Language lesson, Female teacher, 6-10 years' experience)

"Students seem comfortable offering ideas even when they are not sure if they are correct"

(Observed Key Stage 1 lesson, Female teacher, 16-20 years' experience)

Furthermore, there were some teachers in the sample who were observed to be willing to receive a challenge or correction during a lesson from a student, on the basis that this was done respectfully.

At the end of the lesson, the teacher challenges students to come up with a question she can't answer. She names this activity "Beat the teacher".

Students try excitedly to stump her with the most advanced maths questions they can think of.

Female teacher, 16-20 years' experience - Age group/subject: Key Stage 2 (Primary)

Humour was used by many teachers in the sample as a mechanism to maintaining positive classroom relationships. This was typically demonstrated when the teacher made a mistake or said something silly and was willing to laugh about it with the students. This resulted in creating a positive climate within the classroom which, in turn, supported classroom management strategies, and promoted the engagement and enthusiasm of students.

As students write the objective, the teacher is playing spooky music to set the tone for the lesson text.

As an aside, she says, "That is me snoring."

Students scream with laughter at this.

Female teacher, 6-10 years' experience - Age group/subject: Key Stage 3 (English)

Another observed strategy that improved classroom interactions was the teacher knowing students as individuals and taking the time to show they knew something about them. For example, students were seen to react positively when the teacher used their name, greeted them at the door at the beginning of lessons, or demonstrated an awareness of and interest in their lives outside of the classroom through friendly comments.

During registration, the teacher says good morning to each student individually. She offers a few positive comments based on individuals' work in a previous lesson, e.g. "Great learning yesterday!"

Students have just had a 'taster' day to see what secondary school will be like. Before formally beginning the lesson, the teacher gives students a chance to share their experiences and feelings about this.

Female teacher, 16-20 years' experience - Age group/subject: Key Stage 2 (Primary)

However, there were some elements of the classroom relationships that were more difficult to observe and yet were noted by researchers. For example, in most observed classes, students seemed to like their teacher, and teachers' behaviour was generally characterised by enthusiasm and enjoyment in relation to interactions with students. Nevertheless, there some lessons where teacher authority was more directly observable:

"Very structured but supportive approach"

(Observed Key Stage 3 Geography lesson, Female teacher, 0-5 years' experience)

"Strict about silence as needed, sometimes a sharp tone of voice to redirect students"

(Observed Key Stage 1 lesson, Female teacher, 11-15 years' experience)

When asked about this in interview, teachers described this as a feature of their teaching style, or simply a response to previous poor or challenging behaviour by the class.

Systematic Observations Findings: Numeric data

This sub-section provides more details about the two systematic observation instruments used in this mixed methods study. Variation in features of observed classroom behaviour and practices of our sample of 17 inspiring primary and secondary teachers was identified using on data from two international systematic observation instruments. This element of the study was intended to complement the qualitative evidence obtained from analysing teacher

interviews and observers' field notes as well as the findings derived from the student survey and ranking sheets.

In the field of TER, systematic observations have proved to be a valuable method to facilitate comparisons of teachers' behaviours in class by using clear definitions of specific behaviours that have been standardised and systematised through instruments that include pre-determined and agreed categories that reflect aspects of observable behaviour and practice and for which observers are trained and can be reliability checked to facilitate comparisons across teachers, lessons and contexts (Muijs & Reynolds, 2005; Muijs et al, 2014). Two observational instruments were adopted. These are the International System of Teacher Observation and Feedback (ISTOF) and the Lesson Observation Form for Evaluating the Quality of Teaching (QoT). ISTOF originated from reviews of EER and also drew on expert opinion involving teams from 21 countries, using an iterative, multiple step, internet based modified Delphi technique (Teddle, Creemers, Kyriakides, Muijs & Yu, 2006). The QoT instrument was developed through an international collaboration between the Dutch and English inspectorate (van de Grift, Matthews, Tabak & de Rijcke, 2004). It can be viewed as a higher inference instrument that is based on judgments of strengths and weaknesses in specific features by trained observers (in contrast to ISTOF that rates the frequency of observed behaviours). The two instruments were chosen because they had been used in a number of other studies in England (including the earlier *[removed to avoid identification]* research) but had been developed and applied internationally in a range of country contexts. The intention of using these existing instruments developed in the TER tradition was to establish whether the 'inspiring' teachers in this purposive sample would also show more effective behaviours as defined by the TER field and to explore how much individual teachers in our sample varied in their observed classroom practice, based on numeric ratings

by trained observers. All teachers were observed and their lessons rated using both instruments. The lesson observations took place in different year groups, ranging from nursery up to Year 12. The observations were conducted by two trained and reliability checked researchers who had been involved in piloting the instruments prior to the main fieldwork phase. Most of the teachers in the sample (13 out of 17) were observed simultaneously by both researchers but in some instances due to field work logistics only one researcher was present. Where two observers were present the score for each aspect rated for a particular lesson was calculated as the mean score between the two raters. In all, 28 full lessons were observed with 11 teachers being observed in two lessons and six being observed just in one lesson. In all 45 ratings were made.

The ISTOF instrument comprises 45 items, with two to three items per indicator. In turn two or three indicators then form a specific component. There are 21 indicators linked to seven components in the full instrument. Following lesson observations teachers were rated on a five point Likert scale for each item. A higher value indicates that more of the behaviour described by the item was observed. The ISTOF components are:

- Assessment and evaluation
- Differentiation and inclusion
- Clarity of instruction
- Instructional skills
- Promoting active learning and developing metacognitive skills
- Classroom climate
- Classroom management.

The QoT instrument similarly provides a checklist of 26 indicators. These in turn form nine components reflecting different aspects of the quality of teaching. Each component is linked to between two to four of the 26 indicators. Teachers were rated on a four-point Likert type scale for each indicator. A higher value indicates stronger classroom practice observed for the indicator of interest. The nine QoT components cover:

- Safe and orderly school climate
- Stimulating learning climate
- Clear objectives
- Clear instruction
- Activating pupils
- Adaptation of teaching
- Teaching learning strategies
- Effective classroom organisation
- Effective classroom layout.

In contrast to ISTOF, the researchers conducting the observations make an additional final global judgment of Overall quality of teaching for the QoT (van de Grift, 2007) as the QoT includes such an overall global judgment whereas ISTOF does not. Ratings of each lesson using the two instruments were made immediately after the observation had taken place rather than during the lesson. This was a strategy to enable the researchers to focus on watching the activities and making qualitative field notes while observing in the classes. There were advantages and disadvantages in using ‘live’ observations rather than videos. In videos there can be sound quality issues and limitations of camera angles. In live observations, however, there is no pause or repeat button to check events. Nonetheless, the live observations were deemed to be more authentic and enabled more direct experience of

classroom events and atmosphere to be described in the field notes. Using the same researcher to make the field notes and conduct the ratings as well as to conduct the qualitative coding provides a further link between the numeric and descriptive data in this mixed methods study and facilitates integration, but of course it has the limitation that the two sources of evidence cannot be regarded as independent.

The ISTOF and QoT instruments can be seen as similar in some features of their applications, structures and some of their theoretical components. Nonetheless, the two scales do differ in their standardization and operationalisation. The QoT demands stronger inferential evaluations than ISTOF, for example. Although relative frequency (as used in ISTOF) and relative strength (as used in QoT) of a particular teaching behaviour may be associated, they are conceptually different. We were interested to compare how the two different scales apply in studying the classroom work of the inspiring teacher sample and what could be learned from more than one perspective.

Inter-rater reliability between the researchers was assessed for 15 lessons rated simultaneously by both of them using the specialised software AGREESTAT (Advanced Analytics, 2011). Given that the ISTOF and the QoT instruments consist of ordinal scales, the most appropriate indicator to assess inter-rater reliability is Weighted Kappa (Cohen, 1960; Bakeman & Gottman, 1997). The inter-rater reliability achieved in this study is statistically significant and generally sound considering the number of lessons rated, raters and response categories in the instruments (Gwet, 2012), although higher agreement was achieved in the ISTOF protocol (mean Weighted Kappa Quadratic = 0.65) than in the higher inference QoT instrument (mean Weighted Kappa Quadratic = 0.43). This seemed to reflect the more

inferential perspective of the QoT protocol that includes more subjective judgements of quality.

Each lesson was coded separately and, because most teachers were observed in more than one lesson, the mean score between the two lessons was calculated to obtain the final ratings in each component for that teacher. The small sample size of teachers made it inappropriate to carry out factor analysis to study possible underlying dimensions of teacher behaviour in this small scale exploratory study. Instead, analyses were based on the theoretical distinctions adopted by the authors of the instruments. These explored how teachers were rated on the basis of the various dimensions and components in each instrument and the associations between scores within and across instruments. Comparisons could be made as the schedules have been internationally validated in studies involving several countries (van de Grift, 2013; Teddlie et al., 2006).

As well as inter-rater reliability (noted above), the internal reliability of the instruments was also measured. The reliability of the total ISTOF scale in this sample was 0.85 (Cronbach's Alpha (α)), which demonstrates high internal consistency. Taking a more fine-grained approach, however, reliability was found to vary for individual components. The two components *promoting active learning and developing metacognitive skills* and *differentiation and inclusion* showing the highest internal consistency ($\alpha = 0.78$ and 0.76 , respectively). By contrast, the overall reliability statistic for the QoT protocol was notably lower ($\alpha = .69$) although still deemed satisfactory, this is likely to reflect the higher inference nature of the ratings used. Nonetheless, certain components, particularly *adaptation of teaching* and *stimulating learning climate* showed higher internal consistency ($\alpha = 0.75$ and 0.66 , respectively).

The average association found between ISTOF components, calculated using Spearman correlation (r_s), was only moderate ($r_s = 0.33$). This suggests that the instrument was able to distinguish different features of practice, as defined by the components. The strongest correlation was between the components *instructional skills* and *classroom climate* ($r_s = 0.70$) indicating nearly half the variance is shared ($r^2 = 0.49$) and between *clarity of instruction* and *assessment and evaluation* ($r_s = 0.65$, $r^2 = 0.42$). The correlations are based on only a small and purposive teacher sample. However, most of the correlations were relatively modest and non-significant for over three quarters (16 of the 28 possible pairs of components), which suggests that even within this exemplary sample, teacher effectiveness should not be seen as a single construct but appears to be multidimensional, with teachers showing distinct variations in particular components of their observed practice.

The patterns of associations between individual QoT components were somewhat weaker than those found for ISTOF. The average correlation between the components assessed by the QoT was very weak ($r_s = 0.17$), indicating little shared variance. Stronger and significant associations were found between *adaptation of teaching* and *stimulating learning climate* ($r_s = 0.62$, $r^2 = 0.38$) and between *teaching learning strategies* and *effective classroom organization* ($r_s = 0.58$, $r^2 = 0.34$). Correlations for 34 pairs of components (from a total of 36) were non-significant. Interestingly, the overall judgment of the quality of teaching made at the end of the QoT observation was found to be significantly correlated with only one dimension, *safe and orderly school climate*, indicating just over a quarter of variance is shared ($r_s = 0.52$, $r^2 = 0.27$). This suggests classroom climate may be accorded greater weight in instruments that use an overall judgment.

The numeric ratings were also compared to establish whether teachers rated highly for the QoT dimensions were also similarly highly rated for ISTOF or were the two instruments showing different patterns of observed teacher behaviours. The overall correlation between the total mean scores of both instruments was strong, positive and statistically significant ($r_s = 0.73$, $r^2 = 0.53$). Of the sixty-three possible correlations between components of the two scales, there were only twelve significant correlations, although all of them suggested moderate to strong associations. Again, the limitations of the small sample size affect the ability to detect statistically significant associations. The strongest correlations were found between *effective classroom organization* (QoT) and *assessment and evaluation* (ISTOF) with more than 70 per cent of shared variance ($r_s = 0.85$, $r^2 = 0.72$). Other relatively strong associations were noted between:

- *adaptation of teaching* (QoT) and *differentiation and inclusion* (ISTOF) ($r_s = 0.78$)
- *teaching and learning strategies* (QoT) and *promoting active learning and developing metacognitive skills* (ISTOF) ($r_s = 0.77$) and
- *stimulating learning climate* (QOT) and the *classroom climate* (ISTOF) ($r_s = 0.53$).

Our quantitative results based on statistical analyses of the numeric observation ratings and patterns of correlations reveal some overlap between some of the measures of the ISTOF and QoT instruments for our inspiring teachers' exemplars in this small sample. Similarities in content covered were noted earlier in describing the two instruments in this paper. The positive correlations found between features of the small sample of inspiring teachers' observed practices measured by the two instruments confirm some of these similarities in content. Nonetheless, both instruments reveal variation within and between the teacher sample indicating that though these TER observation instruments both seek to measure effective behaviours there are distinctive differences in patterns of association within and

between instruments that point to complexity in the concept of ‘overall effectiveness’ and need to consider different features.

Patterns in the Observed Numeric Ratings

The most notable pattern for the analysis of the observed numeric ratings data set was the high mean score and small standard deviation for all of the components measured by both the ISTOF and QoT instruments. Tables 6 and 7 provide details for mean scores for each component on both instruments. These high scores indicate that teachers in this small inspiring teachers’ sample show unusual and very positive profiles in terms of average effectiveness for all aspects covered by the two international schedules used for the systematic observations.

[INSERT TABLES 6 AND 7 ABOUT HERE]

All of the lessons observed were rated in or above the scales’ midpoints, indicating overall high levels and frequencies of teacher behaviours deemed to be characteristics of effective practice or indicating high quality teaching in the international literature for this small and purposive sample of exemplary teachers. The components showed negatively skewed distributions with high positive kurtosis values, indicating that these exemplary teachers in our sample are unusual and form a relatively homogeneous group. They were clearly rated as exhibiting features related to notions of more effective and high quality teaching practices. This suggests that the MAT head teachers who nominated these exemplary teachers as inspiring also identified some of their strongest (more effective) teachers. We can conclude that being viewed as inspiring was not at the expense of being rated as highly effective for this group.

Based on the numeric ratings for ISTOF our inspiring teachers were particularly strong in creating a *positive classroom climate*, in *assessing and evaluating students' learning*, *managing the behaviour in the classroom* and providing *clear instruction*. Again in accord with these findings, they found to be favourably rated for the QoT components *safe and orderly school climate*, *effective classroom layout*, *clear instruction* and *effective classroom organization*. Teachers' scores were somewhat lower but still positive for the ISTOF components *promoting active learning and metacognitive skills*, and *differentiation and inclusion*. Moreover, teachers had lower mean ratings for the QoT measures *adaptation of teaching* and *teaching learning strategies*. These components were found to be more varied for the sample and thus distinguish differences between individual teachers' observed behaviours more clearly.

Analysis also showed that just four ISTOF items were typically rated less highly than others:

- the teacher gives additional opportunities for practice to students who need them
- the teacher asks students to identify the reasons why specific activities take place in the lesson
- the teacher systematically uses material and examples from the students' daily life to illustrate the course content
- there is clarity about what options are available when the students finish their assignments.

For the QoT, there were only three items that showed lower ratings, indicating that the majority of teachers had higher scores for all other items:

- adapts the assignments and processing to the relevant differences between pupils

- ensures that the teaching materials are orientated towards transfer.
- stimulates the use of control activities.

Taken together, based on the item level data, such items reveal relatively weaker areas in observations made for our exemplary teachers. However, teachers' scores for ISTOF and QoT were still higher than those found in previous more typical samples observed using these instruments. Moreover, our descriptive field notes reveal some additional evidence that helps to illuminate these quantitative patterns as will be reported later in the paper.

Exploring Differences between Groups

Given the small number of teachers in his study the investigation of differences between sub groups must remain illustrative and tentative. It has been included because the study is intended to be exploratory and can illustrate the potential for more rigorous comparisons in larger studies in future. Comparisons were based on overall mean ratings for teachers on different dimensions assessed by the ISTOF and QoT schedules. Teachers were grouped based on school sector (primary/secondary), and career phase. Hedges' *g* (unbiased) calculation of effect size was also employed to investigate differences across groups.

Differences by school sector

Three of the ISTOF constructs were found to vary by school sector. For *differentiation and inclusion*, primary school teachers ($M = 4.17$) were rated significantly higher than secondary school teachers ($M = 3.50$). For *instructional skills*, primary teachers ($M = 4.38$) also showed higher mean scores than secondary teachers ($M = 4.06$). By contrast for *clarity of instruction*, secondary teachers ($M = 4.37$) showed higher scores than primary teachers ($M = 4.07$) (Figure 9).

[INSERT FIGURE 9 ABOUT HERE]

Primary and secondary school teachers also differed significantly in several dimensions of the QoT. For *safe and orderly school climate* primary teachers had a higher mean ($M = 4.00$) than their secondary counterparts in the sample ($M = 3.96$). This was also found for the construct *stimulating learning climate* (primary $M = 3.85$; secondary $M = 3.60$). In accord with the ISTOF comparisons by sector, primary school teachers scored better ratings for *adaptation of teaching* ($M = 3.29$) than their secondary counterparts ($M = 2.71$). By contrast, secondary teachers scored higher in the dimensions *clear objectives* ($M = 3.94$) and *teaching learning strategies* ($M = 3.53$) compared to their primary counterparts in this sample ($M = 3.71$ & $M = 3.26$ respectively) (Figure 10).

[INSERT FIGURE 10 ABOUT HERE]

The finding that primary teachers were rated more favourably for *adaptation of teaching* than secondary teachers may relate to differences in organization and approach. For example, there is greater use of setting in secondary than in primary schools where mixed ability classes are more prevalent. This may affect the extent that teachers perceive the need to adapt, while primary teachers typically work with the same class and so may have greater awareness of different student needs within typically mixed ability classes for the younger age groups.

Differences by career phase

Teachers were also grouped based on their years of teaching experience, with early career teachers (0 to 7 years of experience) versus later mid-career teachers (8 to 23 years of experience). Figure 11 reveals that these two groups differed in ratings for the ISTOF dimension *classroom management*, with mid-career teachers ($M = 4.57$) scoring slightly higher ratings than the group of early career teachers ($M = 4.22$).

[INSERT FIGURE 11 ABOUT HERE]

However, there were no significant differences noted in teachers' observed practice, as assessed by the QoT instrument ratings, between the two groups of early career teachers and mid-career teachers (Figure 12).

[INSERT FIGURE 12 ABOUT HERE]

The analysis of numeric observational data from two different international systematic observation schedules provides new evidence about the features of observed effective classroom practices of our purposive sample of exemplary inspiring teachers. This additional quantitative evidence complements and extends the descriptive results derived from qualitative analyses of teacher interviews and detailed observation field notes. By comparing and bringing together our results (points of interface) in an iterative fashion through the process of coding and comparison, we were also able to draw attention to common characteristics of inspiring teachers' observed classroom practices, such as *positive classroom climate* and *clear instruction*, and distinguish them from other aspects that were less characteristic of these teachers, notably *differentiation strategies* and *the promotion of metacognitive skills*. In addition, the analyses revealed some significant differences within

our sample of exemplary teachers in the primary and secondary school sectors, and between early career and mid-career teachers. We include these comparisons to illustrate the potential for exploration but, being aware of the limited sample size of 17 teachers when comparing sub-groups, the findings should be interpreted with caution.

6. Questionnaire survey: Students' perspectives on inspiring teaching and teachers

A student questionnaire was developed to collect data from students in classes taught by the sample teachers. The aim was to collect evidence on students' self-reported engagement with school and their perceptions about their teacher and classroom climate. Unfortunately, it was not possible to schedule times to administer the student survey in classes taught by all the teachers in the sample due to practical constraints on the field work window. Table 8 shows the numbers of students and classes surveyed for the teachers in the sample. The questionnaire was informed by reviews of the literature and drew on previous survey instruments such as *[removed to avoid identification]* (Authors, 2012), *[removed to avoid identification]* (Authors, 2007a), PISA (OECD, 2005) and RAPA (Levacic, 2002; Malmberg, 2002). Two versions of the questionnaire survey were prepared (one for primary and one for secondary students), although most of the items were the same across questionnaires, but with simplified language for the primary survey. Items were linked to four topics: *My school*, *My teacher*, *My classroom* and *About you in this class*.

In most classes, questionnaires were completed during the researchers' field visits to schools so that researchers could administer the forms and answer any questions from students. However, in some instances this was not possible for practical reasons on timetables in schools where more than one teacher was being observed and interviewed. In these cases,

teachers were provided with the questionnaire materials as well as individual envelopes for students to enclose and seal their responses for the sake of confidentiality and anonymity. Table 8 gives numbers of student, class and school returns. Eleven classes, representing returns for 11 of the 17 teachers, just under two thirds of the sample (64.7%), completed the survey. Two classes were in primary (Key Stage 2), and nine in secondary schools (Key Stage 3, 4 and 5). The total completed sample for the survey was 203 students (35 primary, 168 secondary). The limited number of primary classes means between sector comparisons are difficult.

[INSERT TABLE 8 ABOUT HERE]

The Excel data entering process involved developing a clean dataset where only valid values could be entered in order to prevent miss-key errors. For a further check a subset of questionnaires were double-entered and then checked by an analyst from the research team. The dataset was then exported to SPSS for further analysis. Principal component analysis was used to reduce the data from various sections of the questionnaire. Mean scores for each section were calculated to make comparisons for different student groups divided by student gender, school sector, and teacher gender and career phase. Principal components analysis was carried out within each of the four questionnaire sections in order to detect items that did not contribute substantially to the four theoretically defined sections. Such items were excluded from further analysis. Overall scores for the four sections (that we treat as organising themes) were calculated for each of the 203 students by calculating a mean value from each item in the thematic sections. Mean scores for the four sections were also calculated and analysed by student gender and school sector. Similarly, students' responses were also compared for various teacher groups (by career phase and teacher gender).

In conducting principal components analysis (PCA) for each section of the questionnaire, factor loadings for each item were examined. A cut-off criterion of 0.40 for a substantive factor loading was employed to assess the sizes of the factor loadings for each item (Stevens, 2002). Eight (of 75) items with factor loadings below 0.40 were removed. After PCA, the internal consistency of each scale was tested, using Cronbach's alpha criterion (α) (see Table 9). Overall, the questionnaire presented high internal consistency for the four thematic sections (most α values exceeding 0.80).

[INSERT TABLE 9 ABOUT HERE]

In addition, correlations between the four theoretical sections of the survey were calculated revealing moderate to strong statistically significant associations (ranging from $r_s = 0.33$ to 0.87) (Table 10).

[INSERT TABLE 10 ABOUT HERE]

Statistical patterns in student numeric survey responses

As noted before, two forms of the survey were generated; one primary and one secondary. The four questionnaire sections (*My school*, *My teacher*, *My classroom* and *About you in this class*) provided measures of school climate, teaching practices, classroom environment, and student attitudes and engagement. Each item consisted of a statement and a Likert scale (rated 1-4) representing 'agree strongly' (1), to 'disagree strongly' (4).

Patterns of Students' Questionnaire Responses

The descriptive analyses of the students' questionnaire responses reveal that the views of students in this purposive sample can be characterised as generally very favourable for the topics covered. As has been found in many questionnaire studies that tap students' self-reports of their attitudes, most students rated items fairly positively. In Table 11 we report descriptive statistics based on the analyses of students' responses that have been aggregated at the teacher level.

[INSERT TABLE 11 ABOUT HERE]

As can be seen there are positive mean scores for each of the four aspects covered by the questionnaire instrument. This reveals that overall student views about the topics covered regarding their school, their teacher, their classrooms and their own involvement were generally very favourable. In particular, it can be seen that self-reported views about the teacher were most positively evaluated and showed a highly skewed pattern with the smallest variation for the four aspects covered.

In addition to exploring overall descriptives, each thematic section of the questionnaire was studied in more depth by examining the distribution of students' responses to specific items. It is notable that student ratings for all items showed a significant positive skew and also a high kurtotic distribution. Such patterns are not unusual in student surveys that use Likert type scales for self-report. The frequency distribution of each of the items again indicates that there was a general tendency for students in the sample to rate positively most of the aspects presented in the questionnaire. Moreover, most of the items related to students' perceptions of their teacher were found to have a modal (most frequent) value of one. This is quite striking, as one is the most positive score for the Likert scales. Of especial relevance is the

dominance of most positive ratings for those items about relationships between the teacher and the student. This complements and supports the findings from the teacher interviews and both the descriptive analyses of field notes and the numeric ratings from the systematic ratings of classroom observations. This shows a clear point of interface and triangulation between several sources of evidence in this mixed and multiple method investigation which helps to support the conclusions made about the importance of positive teacher student relationships as a fundamental feature of inspiring teaching for this exemplary sample.

Interestingly, studying the patterns of distributions in student responses to other items, that refer to their school, the classroom climate or students' reports of their own engagement in learning, the results reveal a modal value of two, which though also positive is not as favourable as that found for items relating to their teacher. This again supports the conclusion that these exemplary teachers are indeed unusual and highly rated by their students, more so than the features of their schools. Table 12 illustrates how the questionnaire items were grouped according to the different thematic sections and then ranked in terms of their mean ratings. The items rated most positively are presented at the top of the table and the rest in descending order. Looking at students' self-reports of their school, it can be seen that students rate their enjoyment, feelings of security and attachment to school particularly favourably.

[INSERT TABLE 12 ABOUT HERE]

Other survey results reveal that teachers in our exemplary sample are perceived to have high expectations of students and also are viewed as successful in conveying and promoting enjoyment of learning. Again, these responses accord with, and complement those from, other data sources, further illustrating how multiple methods can provide a richer evidence

base and more trustworthy accounts (in terms of understanding of the characteristics of inspiring teachers in this study).

The descriptive statistical analysis of the student questionnaire survey responses at the teacher level, in relation to their classroom experiences, indicates that as a group the inspiring teachers in our exemplary sample were able to develop a calm, positive, supportive and reassuring classroom climate. In addition, these classrooms were typified by teachers who conveyed clear instructional goals and provided well-structured and managed lessons. Students in the questionnaire sample also provide evidence that they rated their teacher as approachable, fair and helpful. However, although still fairly favourable, somewhat less positive and also more varied ratings were found for items connected to teacher feedback and classroom resources. Taken together the students' questionnaire ratings from our sample indicate they felt they had experienced a positive learning environment in these teachers' classes across the past academic year (surveys were held in the summer term) and revealed these classes of students reported high motivation and positive attitudes towards their work.

The earlier qualitative coding and analyses of teacher interviews had indicated that the inspiring teachers placed much emphasis on promoting student enjoyment of learning and sought to convey their own enthusiasm to motivate students. They also emphasised promoting a positive learning environment and climate in their classes. The numeric student survey evidence complements the findings from interviews and accords with the qualitative analysis of observation data in field notes that provided numerous examples and illustrative vignettes that provide concrete examples of activities and interactions that link with the way inspiring teachers were able to foster student engagement, motivation and enjoyment.

Patterns of Questionnaire Responses for Different Student Groups

In addition to exploring overall patterns, further analyses compared students' responses for different groups divided by gender and school sector. Overall mean scores were calculated for each of the thematic sections. The size of the differences in survey responses between the student groups were compared using Hedges' g effect size.

Differences by student gender

The students who responded to the student survey comprised a good balanced in terms of gender, with responses from 99 boys and 102 girls. However, the composition within individual classrooms in terms of the proportion of females differed, ranging from zero in one instance to 83 per cent in the other extreme, with an average of 46 per cent females. From our data there was only a modest relationship between gender and self-reported attitudes. Overall, girls rated the four thematic sections somewhat more positively than boys, but the size of these differences was fairly modest (all comparisons presenting a g value below 0.6).

Other studies of student attitudes to school have revealed a tendency for girls to give more positive evaluations of school, so differences for these students are in accord with patterns in student surveys in England during the last two decades (see, for example, findings by Rampino & Taylor, 2013; Author, 2008; Author, 2016b).

[INSERT FIGURE 13 ABOUT HERE]

Differences by school sector

When comparing the responses of students by school sector, the results reveal that primary school students show more favourable views than secondary school students in this purposive sample. This pattern is quite clearly evident for responses to items in all four of the thematic

sections in the questionnaire survey (as seen in Figure 14). Most notably, primary students' views about their school ($M = 1.54$) were significantly more favourable in comparison with secondary students ($M = 1.96$). Nonetheless, these findings are interpreted cautiously because they are based on only 35 primary school children from only two class groups. Other studies have typically shown that primary age students tend to have more favourable views of school than those in older age groups so, despite the small number of primary school students and classes in this exploratory study, we can conclude that the sector differences in students' self-reports are in accord with those found in larger scale studies.

[INSERT FIGURE 14 ABOUT HERE]

Open-ended responses from the questionnaire survey

The one open-ended item included as part of the questionnaire survey administered to students, invited them to describe the characteristics of a good lesson, aspects of the lesson they enjoy, and anything that they perceived helped them with their learning. Of those who completed the questionnaire survey, a very high percentage of students (approximately 80%) responded to the optional open-response item (82% of primary students and 80% of secondary students). All responses to this item were transcribed and securely stored using unique, anonymised identifiers by teacher. These were subsequently linked to the other forms of data. Using NVivo, these responses 'were analysed using an approach similar to those implemented for the interviews and observations' (Authors, 2016a: 167), described in the previous section. As this item was open-ended, it generated a variety of responses. Themes identified through the open ended responses were noted from qualitative coding and included lesson activities, specific resources, teaching methods, climate, relationships and classroom management. Again, the theme of relationships has been chosen to illustrate the data

generated by these questions and how this enriched the findings from the quantitative analyses of students' responses described in the previous section.

Relationships

Of those who responded to this item, approximately 18 per cent explicitly mentioned that the relationship with their teacher was important. Most students referred to the relationship positively, which reflected findings from both the interviews with our exemplary teachers and the classroom lesson observations. There were some comments focused on the personality or attitude of the teacher and, again, most were positive using words such as 'friendly', 'nice', and 'kind' that highlight socio-emotional features that link with teacher student relationships and their role in supporting learning and motivation:

"I have learnt many things from this teacher, he is very friendly and helpful"

(Female, Key Stage 4, Maths)

"The teacher has to be good and kind, or it puts people off the work." (Male, Key Stage 3, English)

"...My teacher always is KIND." (Female, Key Stage 2, Primary)

The importance of respect between teacher and students was also mentioned, as well as the role of 'fair and equal treatment' in being respectful:

"Be a fair teacher, don't take a side even if they are dumb or clever" (Female, Key Stage 4, Maths)

"Where a teacher treats a student with the same level of respect as we respect them"
(Male, Key Stage 3, Geography)

A small number of students reported that the state of the relationship could depend on recognition gained for pieces of work or student progress:

“To make a good lesson would be to be nice and kind to each other and the teacher be nice to us, but so we are pushed to get our work to a high standard...” (Female, Key Stage 3, English)

“The teacher needs to be a nice teacher to students who work hard but should be strict to students who don’t work well” (Male, Key Stage 3, Geography)

Linked to this, was the teacher’s knowledge and understanding of individual students in order that interactions between teacher and student could be personalised to an extent:

“Also the teacher should try to find out about the student and try to know them”
(Female, Key Stage 3, Art)

“An understanding teacher that helps when needed but understands how the pupil feels and that respect you in the learning” (Male, Key Stage 3, Geography)

“A good lesson is when the teacher listens to your ideas” (Female, Key Stage 3, English)

Having highlighted the ways in which data were collected using a variety of research instruments, the next section of the paper discusses the benefits and challenges of integrating different datasets, approaches and perspectives.

7. Conclusions: Combining the ‘ways that you do it’

This research study of inspiring teachers chose to use a mixed methods design involving multiple methods. This choice reflected the small scale and in-depth approach to try to engender findings about a purposive sample of exemplar teachers. These teachers were identified specifically by their schools, because they and their practice was regarded as in some way 'inspiring' for other colleagues and students and, therefore, worthy of inclusion in a collaborative small scale enquiry deemed to have potential to support professional learning and support improvement. We follow a pragmatic philosophical approach that rejects the view that qualitative and quantitative methods are dichotomous alternatives and that takes the position that linking multiple methods providing descriptive and numeric data provides greater triangulation opportunities and richer insights through the combination of numbers and narratives (Gorard & Smith, 2006; Author, 2017; Spalter-Roth, 2000).

Following a mixed methods approach was deemed to be most appropriate for the purposes of our enquiry to answer the main research questions concerning inspiring teachers and inspiring practice, and this fits with the emphasis given to the primacy (or dictatorship) of the research question (as discussed by Tashakkori & Teddlie, 2003; 2010; Author, 2010b) in mixed methods studies. The key to successful mixed methods research is integration, which means that the analysis, interpretation and conclusions should generate new knowledge through mutual illumination that goes beyond the sum of the separate qualitative or quantitative methods through some form of mixing (Author, 2010b). Our aims were to address three interrelated aspects and so enable triangulation through multiple methods tapping into different perspectives and seeking mutual illumination. What do teachers say? What do teachers do? And what are their students' views and experiences? To address these fully the study collected evidence from three main sources that provide complementary and

overlapping sets of evidence, both numbers and narratives in combination (as illustrated in Figure 15):

- teachers' own voices and insights (based on interviews)
- observations of teachers' classroom practice (using both field notes and ratings from systematic observation schedules)
- students' views and insights (derived from ratings of items in a structured questionnaire survey plus analyses of free responses to an open-ended question).

[INSERT FIGURE 15 ABOUT HERE]

Limitations

This study is based on a purposive sample of 17 teachers that were nominated by their head teachers drawn from just 9 schools. It was a cross sectional study conducted by field work in a single term toward the end of the school year and in a particular historic context (a time when major changes to the national curriculum, assessment and examination system were causing considerable turmoil and pressures in schools across England). Given the nature of the sample it is not appropriate to seek to generalise from the findings. Moreover, while all teachers were interviewed and observed, the ability to collect student survey data was affected by the time frame and logistics of field work during a term with exams and school visits are usually conducted, and only classes taught by 11 teachers were able to be included.

Another potential limitation is lack of independence in the data collection, administration of the student surveys and coding of data. Although the small research team was carefully trained and reliability checked, the team were aware that all the teachers had been identified as exemplary practitioners in relation to the focus of the research and this may have affected

judgement. The researchers were familiar with the literature on inspiring and effective teaching. They also wrote the field notes informed by headings linked to features identified in the review.

The systematic observation ratings were made immediately after the lessons were observed and notes taken, so again this sequencing may have influenced the ratings. In addition, teachers were interviewed after a lesson observation and again this may have shaped findings. They also knew they had been nominated as exemplars by their head teacher and this could have shaped their responses.

It is particularly important to be aware of the sequencing and process of data collection and coding in mixed methods studies and how this may shape, as well as facilitate, the findings and processes of integration and meta-synthesis.

Having said this, the training of staff and their involvement in both the analysis of the descriptive and numeric data was also a strength in the intention of the study to bring together numbers and narratives to better understand inspiring practice through multiple perspectives and illuminate it via examples and vignettes.

The study was intended to be exploratory in nature and although some comparisons were made by teacher gender, career phase (based on years of experience) and school sector, these findings must be interpreted with considerable caution given the small number of teachers in total and especially the small numbers in the sub-groups compared.

Finally, it must be acknowledged that the study, being led by head teacher interest (and those across schools and presumably staff in the MAT) chose to focus on inspiring practice within the particular schools in the MAT. There was a concern to move away from the perceived focus on Ofsted inspection on ‘Outstanding teaching’ and its accountability connotations. The intention was to learn from exemplary practitioners within and across these schools. This meant that the research only focussed on exemplars based on head teacher’s perspectives. It could not make comparisons with typical or indeed weaker (uninspiring) teachers.

A further follow up study with a broader sample of teachers would be needed to make such comparisons. Moreover, the small purposive sample and short time scale precluded the collection of student outcome data so it is not possible to establish whether students taught by these teachers would have made greater academic gains, or shown better outcomes in other areas.

Addressing the Research Questions

Here we examine the ways in which the combination of methodological approaches impacted on the study of inspiring teachers, and explore the ways in which the study addressed the research questions by employing multiple methods of data collection and triangulation based on bringing together and comparing findings to establish how far they supported, extended or challenged each other.

Combining insights from interviews and field notes

The thematic analyses of the rich descriptive teacher interview data provided many findings about teachers’ accounts (stories) and understandings of what constituted inspiring practice and their own thinking about and intentions as teachers, including how they themselves had

been influenced by other teachers who they had found inspiring (for some when they themselves were at school, for others later when in training or earlier in their careers as teachers). This finding supported the notion of inspiring practice being ‘infectious’ and of inspiring practitioners acting as a role model. These inspiring teachers had in nearly all cases been inspired by a teacher when they were at school or a mentor or other colleague at earlier points in their careers. These findings have implications for recruitment and retention of teachers to the profession. The teachers’ interviews also highlighted the importance of relationships with and support from school leaders and colleagues and many were also closely involved in working with, and supporting the professional learning of, colleagues and clearly valued collaborative working. This indicates that inspiring teachers tend not to work in isolation but are important in the work of their schools often via leadership responsibilities that involve working with colleagues. They are, thus, well placed to play a leading role in the development of professional learning communities in their schools and, through this, to support their own school’s improvement aims and the broader aims of their MAT to enhance the quality of teaching and learning.

The qualitative coding and analysis of the detailed field notes written during lesson observations provided further rich descriptive findings about what was seen in the classrooms during lessons. The research provides many examples and vignettes of incidents in natural classroom contexts that serve to illuminate and enhance understanding about what these exemplar teachers actually did in practice. They, thus, extend what could be learnt from the numeric ratings based on the two international systematic observation schedules that originated from research in the teacher effectiveness field, again illustrating the combining of numbers and narratives. The combination of their self-reports and the examples and vignettes

in the field notes provides richer understandings of the main themes and how teachers' intentions were enacted in lessons.

This study has an exploratory and descriptive stance and does not seek to make generalisations or causal statements. We acknowledge that it is not possible to establish with any certainty whether the kinds of common practices we identified from the qualitative analyses of examples in the lessons we observed are robust indicators specifically of inspiring teaching, or whether some might be better viewed as necessary but not sufficient conditions for it. Thus, the examples and vignettes have provided us with important findings about what our exemplar teachers were observed to do in real lesson contexts, but it is not possible to say whether specific aspects are necessarily what makes them stand out as especially inspiring. However, we can illuminate, by combining our different sources, certain themes that are especially evident in terms of points of interface (Guest, 2013) that help to support the importance we attach to certain themes.

In this paper, we have given especial focus to the major theme of positive relationships to illustrate our findings in relation to our three linked research questions. We have shown how field notes provided specific examples of positive teacher student relationships in practice. For example, we note the role of appropriate and friendly humour in teachers' interactions with students and the strong focus on promoting enjoyment for both teachers and students through interesting and varied activities and active student participation. These teachers showed strong capacities for empathy (what would students like to do and enjoy in lessons) and could put themselves in their students' shoes, metaphorically speaking. The observation data provided from the vignettes extracted from the field notes was supported by the evidence from teachers' voices in terms of the priorities they highlighted in their interviews related to

these topics. Thus the combining of methods and findings provides deeper understandings and more robust conclusions that together strengthen the conclusion that positive teacher-student relationships are a key feature of inspiring teaching amongst this sample of exemplary teachers. Nonetheless, we acknowledge that further research could be conducted to establish more conclusive connections between inspiring teaching and specific observed practices. This could build on the present study but extend it, for example, by working with a sample teachers identified as inspiring as well as teachers who are not so classified (as noted in the limitations section above), to provide a further basis for comparison and to illuminate differences.

It should also be noted that, although we found many examples of connections between the qualitative observations and the interview themes and findings, this was not always possible. Thus in some instances a few themes emerging from the interviews in relation to teachers' past experiences, for example, were not directly observable in lessons, and so we could not make comparisons with the observation data. Other themes emerging from what teachers said about inspiring teaching, such as *positive relationships with students*, *relevant teaching*, *safe and stimulating classroom climate*, *positive classroom management*, and *innovative teaching*, were, however, strongly supported and complement major themes that emerged from the qualitative observation data. Our data provided many examples, in the form of short vignettes, that illustrated the importance of these four major themes and their associations. Moreover, the theme of *innovative teaching* which was noted by the teachers in interviews, for example, was linked with and identified as closely connected to the theme of *variety* under the broader theme of *lesson activities and structure* in both the interviews and also evident in examples from the lesson observations. Thus, teachers made mention, at interviews, of trying out different things and adapting lessons and also of using a mix of

different types of lessons or approaches all with the intention of promoting student engagement and enjoyment and so promoting learning. The descriptive field notes from the observation complemented the interview findings with concrete examples of how this was adopted or evident in specific lessons.

The interviews also allowed the in-depth probing of issues relating to the teachers' own understandings and definition of inspiring teaching (by exploring their own definitions of inspiring practice and also by asking about teachers who might have inspired them in the past, as examples) as well as giving these exemplar teachers opportunities to reflect on their own work and school contexts. The respondents seemed to enjoy and value the opportunities to talk about their work contexts, teaching experiences and priorities, as well as noting challenges they faced. Our findings indicate that this purposive sample of teachers showed strong abilities to reflect on their own practice and roles in their schools. From this, we draw the tentative conclusion that being a reflective practitioner was associated with both highly effective and inspiring practice. The qualitative observations also provided deeper insights into these teachers' classroom practice, and offered an opportunity to make notes about specific aspects of lessons, dynamics, practices and behaviours that go beyond the scope of the ratings from the two systematic observation instruments we used in the study. In this way, our multiple methods provided greater detail about individual classroom contexts and individual teachers' behaviours, as seen in specific lessons. In particular, the use of specific vignettes provided concrete examples of how teachers worked in their everyday classroom contexts to offer inspiring learning opportunities and promote student engagement and enjoyment of learning. Such evidence complements but also extends the quantitative observation findings by adding authentic detail and trustworthy accounts that can extend

opportunities to learn from these exceptional practitioners about inspiring practice in operation.

Combining numbers and descriptive data in the Observational Analysis

The links between ratings in the systematic observation instruments and findings from qualitative analyses of the field notes for the same lessons (points of intersection and ways to integrate) can be seen to serve two different purposes.

- Triangulation: This enables us to establish how far the qualitative findings accord with the patterns emerging from the quantitative analyses.
- Elaboration: This enables us to establish whether, and if so how, the qualitative findings can enhance our understanding of what the patterns in the quantitative results show.

First of all, we can consider these teachers' observed lesson practice as rated by researchers using the ISTOF and QoT instruments. The quantitative ratings revealed that the sample of exemplar inspiring teachers in our investigation scored very highly in most features typically associated with effectiveness in the teacher effectiveness literature and as measured by the schedules adopted in our research. This is an important finding; compared with rating profiles in past larger studies using these two instruments, these exemplary teachers were unusual in terms of consistently higher scores. We could therefore argue that the sample showed strong features of effective practice. They scored most highly in components related to *classroom climate, classroom management, assessment and evaluation, effective classroom layout and organization, and clear instruction*. These components tap into aspects also revealed in themes based on the coding that generated qualitative findings from the field notes that support and extend understanding. The qualitative field notes produced findings on *lesson*

activities and structure, questioning and feedback, and classroom management that emerged as strong themes in the field notes. *Classroom environment* was also identified as a prominent feature in the qualitative observation data.

In terms of elaboration and extension by combining the qualitative and quantitative observation findings, as a second additional form of analysis, the research was able to enrich understanding. Thus, the field notes results provide many insights into what teachers did in lessons, in terms of concrete examples that can help illuminate the high ratings these exemplar teachers typically obtained on the two systematic observation instruments. We can, thus, illustrate what say, ‘Clear instruction’ meant in practical terms.

In terms of the focus on Positive relationships highlighted in this paper, the transcribed and coded field notes provided many instances where teachers were seen to provide students with much positive feedback on their work or behaviour, interacting in friendly and relaxed ways with students, treating students as individuals, and creating a safe space for all to contribute to lessons, so seemingly promoting student engagement, active participation and motivation. All these were seen as helping to promote a positive classroom climate (a component highly rated in the systematic observation schedules). Field notes also revealed that the teachers typically articulated clear and explicit objectives, and took trouble to clarify directions and demonstrate skills. These can also be seen as supporting the concept of clear instruction, a component on which the sample were also highly rated in both the systematic observation schedules. In addition, our sample of teachers were frequently described in field notes as using skilful questioning and feedback and this was perceived by observers as encouraging students in their classes to participate, think and reflect. Taken together, these strategies seemed to serve as informal ways to check and support students’ understanding. Again, these

details and examples from the coded field notes and themes grounded in the qualitative data extend as well as complement the findings from the two systematic observation schedules.

Other aspects highlighted in the field notes include classroom layout and organization. These were described in ways that pointed out how they were stimulating, informative, and also efficient. Examples seen suggested students could access the resources they needed in most lessons observed, and teachers made the best use possible of the space and resources available (even in crowded classroom contexts). Being inspiring was not at variance with being well organised and skilful in these areas.

Classroom management was an aspect highly rated in the two systematic schedules and was also highlighted positively in the field notes for these teachers. There was a notable absence of negative examples of poor behaviour or harsh responses by teachers. It was evident from field notes that, in most of the classrooms, well established routines and clear expectations had been developed that reduced the need for teachers to actively manage their students' behaviour. Often, students were seen to take on roles of leadership, appearing to have internalised a sense of ownership of the classroom space and resources, and often showed positive social skills and mutual respect in their interactions with classmates and their teacher. Nonetheless, in most lessons, teachers did need to engage in some minor redirection or reminders of classroom or school norms, but this was done while maintaining a positive emphasis and without a sense of conflict, teachers were alert and sensitive in their classrooms interactions with students, helping to support a positive behaviour climate without harsh responses. In understanding these findings, it should be remembered that the lesson observations in this study were conducted in the summer term towards the end of the

academic year and this is also likely to have supported the development of clear expectations and smooth routines.

One interesting overarching finding based on the combining of findings from the mixing of methods concerns the relatively weaker (though still positive) ratings for four of the components based on the ISTOF and QoT quantitative observation ratings. These were not typically as evident when the qualitative field notes were analysed and compared. This can be seen as extending and challenging interpretations in these instances.

Thus, two component, *differentiation* and *promoting active learning and metacognitive skills* (on the ISTOF instrument), and two from the QoT scale, *adaptation of teaching* and *teaching learning strategies*, were described fairly favourably in examples from coding the field notes for this sample of teachers. A potential explanation for the apparent discrepancy between the numbers and the coded field notes observation findings in this example of a ‘point of interface’ (Guest, 2013) is that teachers’ approaches to differentiation and teaching metacognitive skills were largely informal. Due to this, they were not picked up in terms of matching the specific item descriptions used to cover these topics in the systematic rating scales in the two schedules used. Thus, based on the qualitative field notes the coding produced the finding that most teachers were seen to offer some forms of individual support in their lessons and some also gave students a degree of choice between difficulty levels or activities related to the same objective in their lessons. Both of these can be interpreted as forms of differentiation, though implemented flexibly and informally rather than formally. Likewise, from the field notes it was seen that teachers did not usually teach their students specific learning strategies in an overt way, but rather they were seen to prompt students to

give peer feedback and also to reflect on their own learning. These can both be seen as forms of tasks that support metacognitive skills.

Student perspectives

In the section on open-ended responses reported for the student questionnaire survey, a number of quotations, included as examples, illustrate that students did not all interpret the open-ended question in the same way, even though they were given the same basic directions and question wording. In coding the written responses, it was found that some responded to the question in terms of an imaginary ideal teacher or lesson, whereas others used it to comment on some of the practices of their current teacher or teachers in general. Some other students wrote in highly specific terms about the reasons why they felt their current teacher's lessons were good or effective. Due to these various interpretations, it was not considered appropriate to compare the themes derived from the open-ended question with numeric ratings of the survey items that employed Likert scales. Nonetheless, we can draw some general findings in terms of an overall similarity, because the vast majority of students tended to write positively about teachers, while from the statistical analyses of students' ratings our analysis revealed students' views were very favourable especially about their teacher's practice. Taken together, both sets of findings suggest most students typically responded very positively about their teachers. This links well with our broader conclusions concerning the importance attached to positive relationships by teachers in this purposive sample. It also accords with the importance they attached to creating a positive and supportive classroom climate and the value they placed on promoting student engagement, enjoyment and participation in lessons, which were evidenced by both the systematic observation ratings and the field notes thematic analysis.

In this paper, we have attempted to provide a detailed account of the ‘ways we did it’ in focussing on why and how we adopted a mixed methods design and used multiple methods to address our particular research aims and questions. We feel that such combination can be particularly helpful in supporting the kind of small scale exploratory and descriptive research we have used as an example here. As noted elsewhere, mixed methods designs can be highly flexible and creative in their enactment and are well suited to educational research (Author, 2010b; Author, 2017). In the research example, we sought to investigate, describe and enhance understanding of what is meant by the terms inspiring teachers and inspiring practice, through drawing on different perspectives and sources of evidence and studying a purposive sample of exemplary teachers. This paper has examined the ways data from multiple sources has been coded, analysed and combined to support integration and synthesis (Author, 2017) and provide new understandings and insights. The Inspiring teachers study shows how findings from different perspectives provide evidence that can be linked together. In particular, there is a triangulation and combination based on 1) teachers’ voices as they were expressed through semi-structured interviews, 2) what we saw in lessons conducted by these teachers in their classrooms (based on ratings from two systematic observation schedules and detailed descriptive field notes) and 3) their students’ views (collected using a questionnaire survey).

While each source makes a unique contribution, by comparing and combining findings and identifying points of interface, we illustrate the ways findings from different sources overlap in ways that add to the robustness of the conclusions drawn, and also how some findings extend or elaborate understanding or point to tentative explanations where discrepancies emerge. The teachers in the inspiring teachers sample were found to show a high degree of engagement with their students, they are committed effective, knowledgeable and well-

organized professionals. Our interview evidence and observations suggest they have a passion for teaching and are focussed on the well-being of their students. In addition, we have produced findings from multiple sources that suggest they are confident and reflective practitioners. Despite challenging policy contexts, all but one remained positive and committed to the teaching profession. All but one wanted to continue in their teaching careers and all gave the impression from interviews and observations that they genuinely liked being with their students and enjoyed teaching. Moreover, these feelings seem to be reciprocated by students in their classes based on both the field notes from lesson observations and the analyses of the student questionnaire survey. From observations of lessons in their classes we identified a strong emphasis on making learning enjoyable and engaging and promoting students' motivation. From the observations, teaching showed high quality and effective characteristics (in terms of the dimensions and components measured by the two international instruments adopted). Moreover, the vignettes extracted from the coded field notes confirm that the classroom experiences these exemplars provided were typically varied, imaginative and enjoyable for students. Interview evidence indicated that these inspiring teachers valued the support they received from school leaders and colleagues in their particular schools. They enjoyed collaborating with, and supporting, their colleagues and many had some form of leadership roles in their schools.

As described earlier in this paper, based on our review of literature we had proposed a framework to guide our research that drew attention to three aspects:

- positive student outcomes (such as motivation, self-efficacy, aspiration, achievement), time frame (both long and short term effects),
- particular teacher behaviours and practices,

- teacher characteristics (e.g. personality traits, knowledge, and motivation), and relationships (heavily emphasized in the non-empirical literature).

By ‘mixing it up’, through the combination of multiple methods, the inspiring teachers’ research has been able to generate new understandings, linking numbers and narratives that connect with the areas highlighted in the framework we developed from our initial literature review. The integration has provided evidence about these exemplary teachers’ influence on student outcomes such as enjoyment and engagement and participation in lessons (supported by student responses, teacher intentions expressed at interview and from observations, both field note examples and systematic ratings). It has also been able to identify and describe in detail particular teacher behaviours and practices in everyday classroom settings and identified various teacher characteristics that help to illuminate what it means to be an inspiring teacher and understandings of inspiring practice based on a small sample of exemplary teachers. The study has a number of important limitations and we cannot claim that our findings are necessarily generalizable to other contexts, but we hope they may stimulate further research with larger and more varied samples. However, in relation to the aims of mixed methods enquiry to bring the human back into research (Tashakkori & Teddlie, 2010), we hope they have value for practitioners interested in professional learning and the improvement of practice.

The findings from the research have indeed been used for such purposes having fed back into the work of *[removed to avoid identification]* to support its school improvement resources and approaches. The research has implications for supporting teacher education, professional development and the creation of professional learning communities, as we have outlined elsewhere (Authors, 2016b). It has also informed further observation studies of classroom

practice by illustrating how a mixed methods lens combining multiple methods involving numbers and narratives can provide different perspectives that go beyond the limitations of relying on mono-method designs in studying complex classroom contexts (Authors, 2018).

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¹ Abbreviation for International Instrument for Teacher Observation and Feedback, see Teddlie et al., (2006)

² Abbreviation for Lesson Observation Form for Evaluating the Quality of Teaching, see van de Grift (2007)

³ For students, informed consent was required from a parent/guardian. Each student was also asked for verbal consent.

⁴The original instrument contained 18 constructs. However, after piloting the instrument and based on the suggestion of some teachers, the decision was taken to exclude the dimension “Being an effective teacher”, as this category was considered broader and qualitatively different from the other 17 constructs. Teachers in the pilot suggested that this underpinned all their work and the other constructs in the list.

⁵ It is important to note that, although these attributes were chosen as relatively less important teaching qualities, they were still considered relevant qualities by some of the teachers, although generally not as important as the rest of those listed.

⁶ We use Hedges' *g* (unbiased) calculation of effect size, a more conservative indicator of the magnitude of the difference between two means than other commonly used measures of effect size, such as Cohen's *d*, as it adds a correction factor for small samples (Hedges & Olkin, 1985).

⁷ The sample of the study did not include late-career teachers.

Tables

Table 1: Composition of sample - school level and gender

	Female	Male	Total
Primary	7	0	7
Secondary	6	4	10
Total	13	4	17

Source: Authors (2016)

Table 2: Composition of sample - subject taught

Subject	Number of teachers
English	2
Mathematics	2
History	1
Geography	1
Modern Foreign Languages	2
Art	1
Physical Education	1
General Primary	7
Total	17

Source: Authors (2016)

Table 3: Composition of sample - key stage taught

Key Stage	Number of Teachers
Key Stage 0	3
Key Stage 1	2
Key Stage 2	2
Key Stage 3	6
Key Stage 4	2
Key Stage 5	2
Total	17

Source: Authors (2016)

Table 4: Composition of sample - years of teaching experience

Years of Experience	Number of Teachers
0-5	5
6-10	6
11-15	4
16-20	2
Total	17

Source: Authors (2016)

Table 5: Overview of sample size by research instrument

	Interview	Quantitative Observation	Qualitative Observation	Ranking Sheet	Student Survey
Teachers	17	45	28	16	
Head teachers				8	
Students					203

Source: Authors (2016)

Table 6: Descriptive statistics for ISTOF components (1 = Lowest score, 5 = Highest score, N = 17)

Component	Mean	Std. Dev.	Min.	Max.
Assessment and evaluation	4.69	0.40	3.38	5.00
Differentiation and inclusion	3.78	0.67	2.25	4.75
Clarity of instruction	4.25	0.33	3.33	4.83
Instructional skills	4.19	0.40	3.46	4.83
Promoting active learning and developing metacognitive skills	3.78	0.60	2.50	4.7
Classroom climate	4.80	0.17	4.38	5.00
Classroom management	4.43	0.29	3.83	5.00

Source: Authors (2016)

Table 7: Descriptive statistics for QoT components (1 = Lowest score, 4 = Highest score, N = 17)

Component	Mean	Std. Dev.	Min.	Max.
Safe and orderly school climate	3.98	0.04	3.88	4.00
Stimulating learning climate	3.70	0.28	3.00	4.00
Clear objectives	3.85	0.21	3.25	4.00
Clear instruction	3.95	0.10	3.67	4.00
Activating pupils	3.76	0.26	3.00	4.00
Adaptation of teaching	2.95	0.41	2.00	3.75
Teaching learning strategies	3.42	0.26	2.92	4.00
Effective classroom organisation	3.87	0.17	3.50	4.00
Effective classroom layout	3.91	0.21	3.25	4.00
Final judgement	3.99	0.06	3.75	4.00

Source: Authors (2016)

Table 8: Number of student questionnaire data returns

	Number of students	Number of classes / teachers	Number of schools
Primary school survey	35	2	2
Secondary school survey	168	9	5
Total	203	11	7

Source: Authors (2016)

Table 9: Number of items and Cronbach's Alpha by student survey section (N = 203)

	Number of items	Cronbach's Alpha (α)
My school	6	0.87
My teacher	6	0.81
My classroom	39	0.96
About you in this class	16	0.94
Total	67	0.98

Source: Authors (2016)

Table 10: Correlations among thematic sections of the student survey (Spearman's rho, N = 203)

	School	Teacher	Classroom	About you in this class
My school	1			
My teacher	.33**	1		
My classroom	.46**	.66**	1	
About you in this class	.39**	.57**	.87**	1

** Correlation is significant at the 0.01 level (2-tailed).

Source: Authors (2016)

Table 11: Descriptive statistics for student survey sections (1 = Highest score, 4 = Lowest score, N = 11)

	Mean	Standard deviation	Minimum	Maximum
My school	1.87	0.28	1.43	2.31
My teacher	1.41	0.19	1.15	1.68
My classroom	1.67	0.20	1.38	1.97
About you in this class	1.64	0.22	1.33	2.02

Source: Authors (2016)

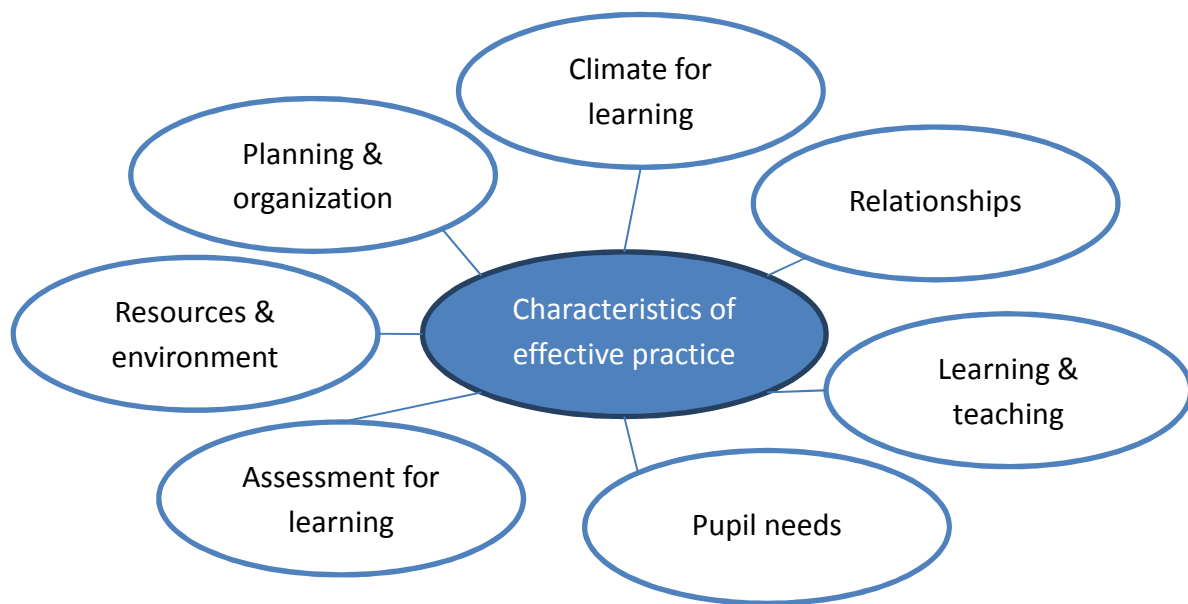
Table 12: Descriptive statistics - 'My School' section (1 = Highest score, 4 = Lowest score, N = 199-202)

Item	Mean	Standard deviation
I feel safe in this school	1.83	0.69
I like being in this school	1.84	0.66
I feel I belong in this school	1.89	0.69
I like most of the lessons	1.89	0.58
I really like this school	1.90	0.63
This school is a friendly place	1.93	0.73

Source: Authors (2016)

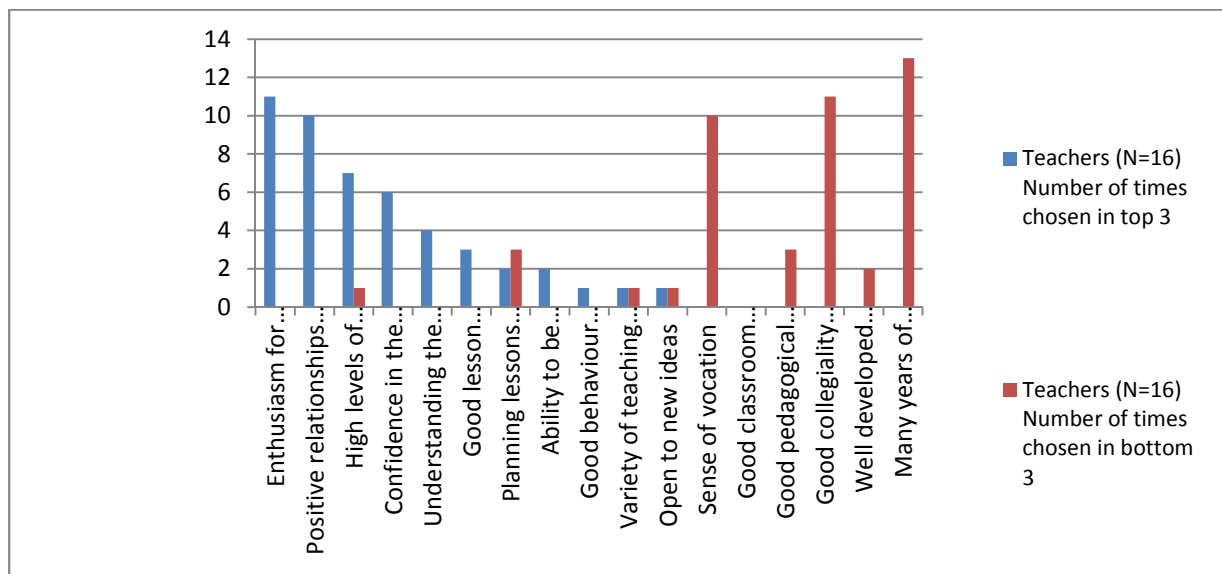
Figures

Figure 1: Conceptualisation of effective classroom practice



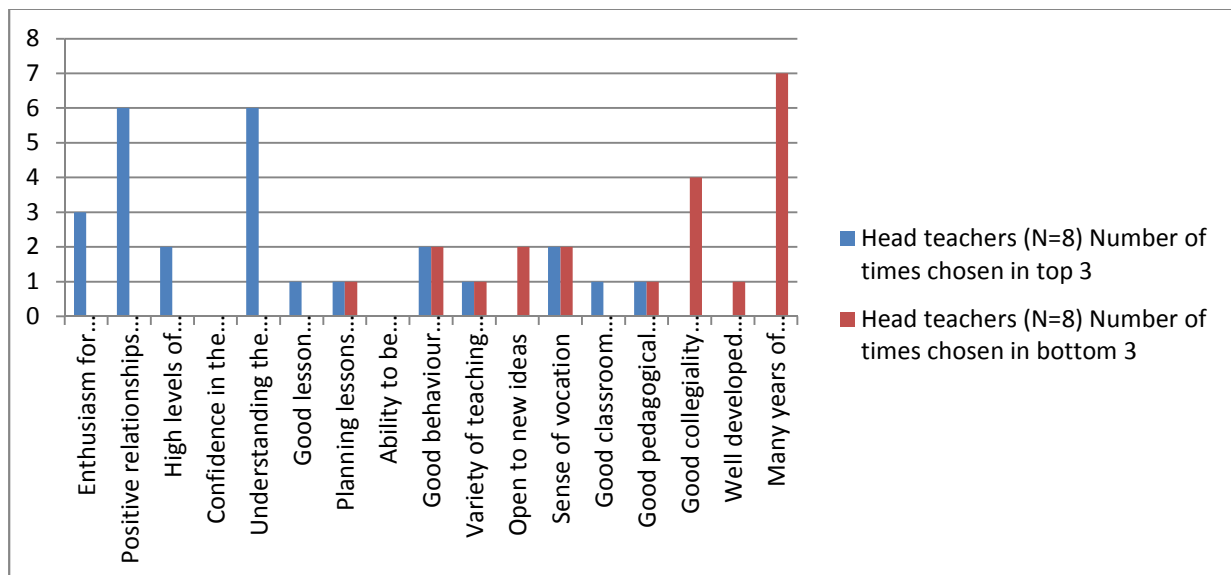
Source: Authors (2016)

Figure 2: Prioritisation of teacher attributes (by teachers)



Source: Authors (2016)

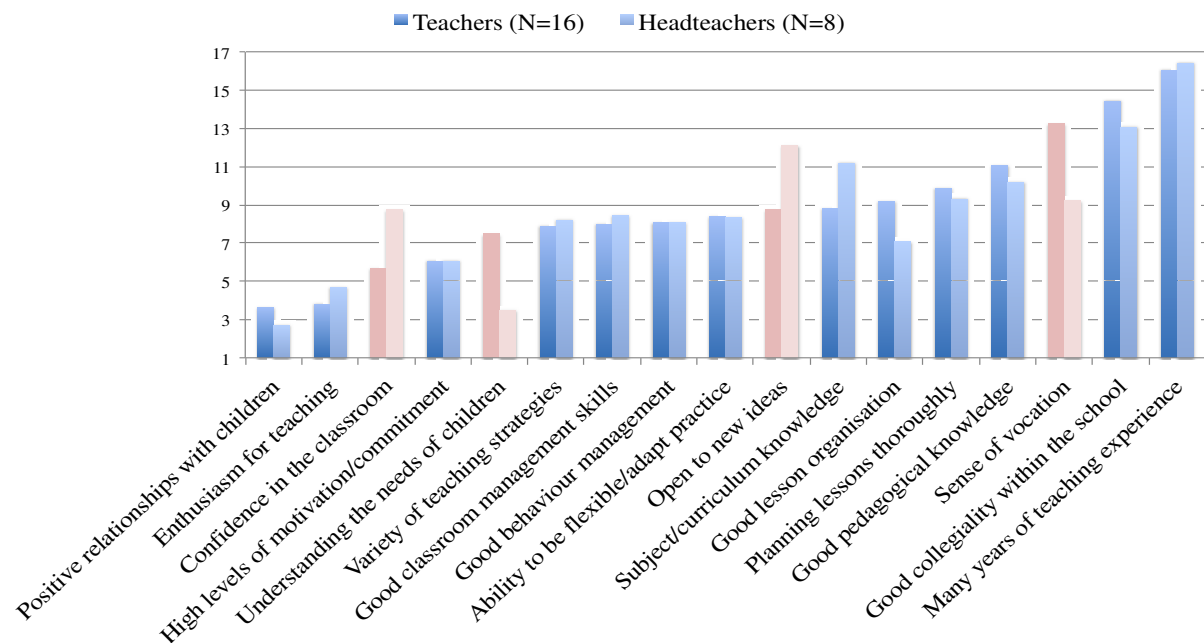
Figure 3: Prioritisation of teacher attributes (by head teachers)



Source: Authors (2016)

*Figure 4: Average ranking position of teacher attributes (for teachers and head teachers)**

(1 = Highest rank position, 17 = Lowest rank position)

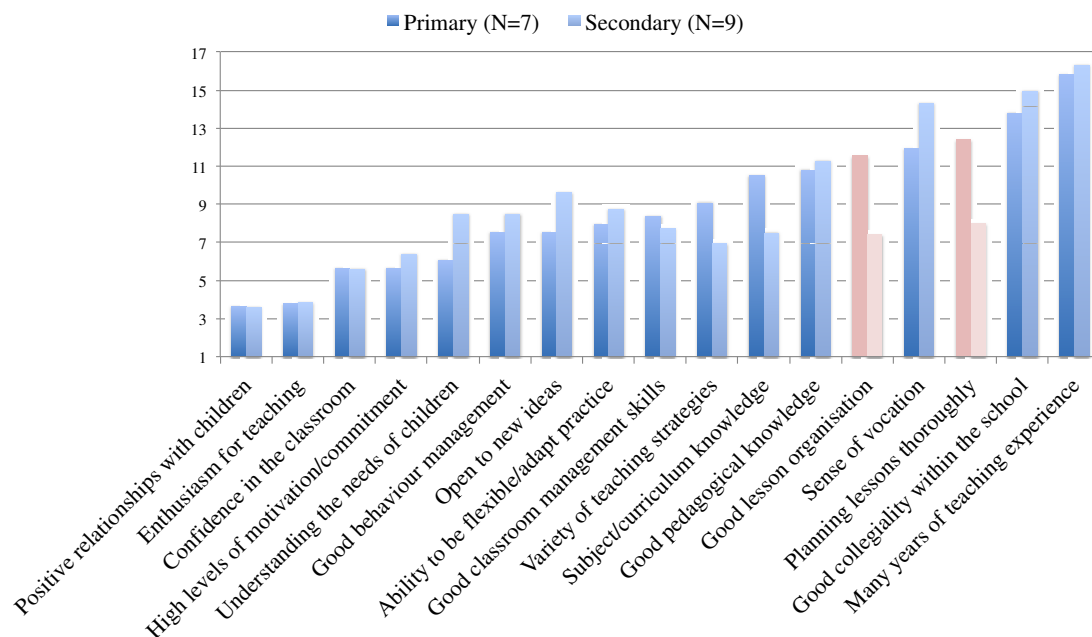


* Those constructs for which the difference across groups is large (Hedges' $g \geq .8$), are indicated in pink.

Source: Authors (2016)

Figure 5: Average ranking position of teacher attributes (by school sector)

(1 = Highest rank position, 17 = Lowest rank position)*

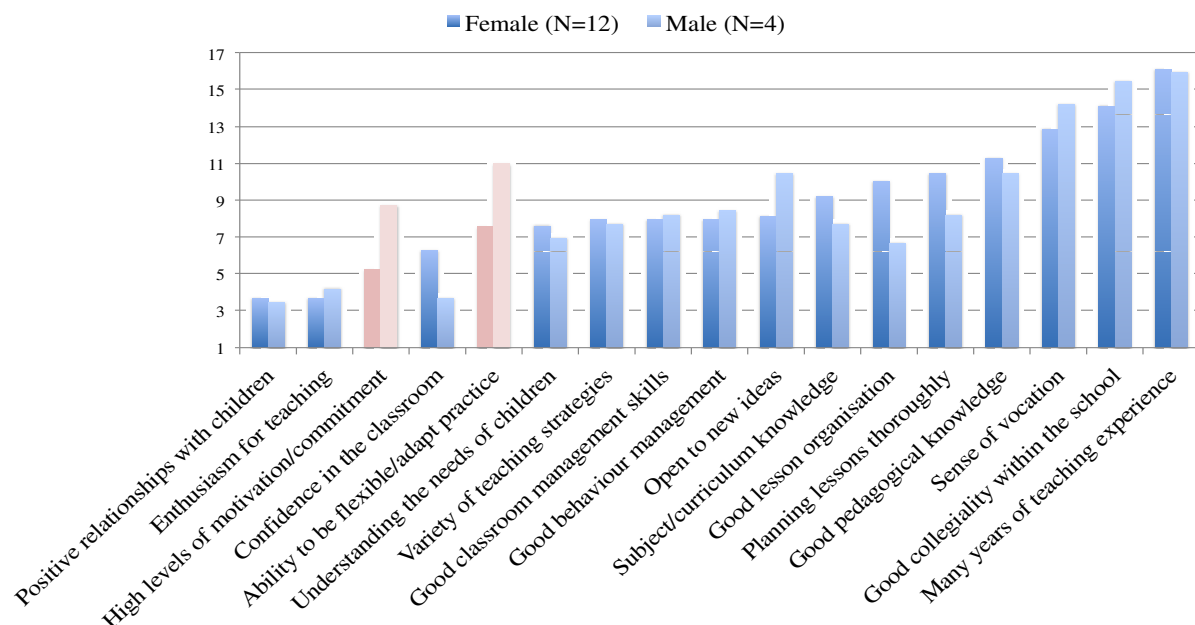


* Those constructs for which the difference across groups is large (Hedges' $g \geq .8$), are indicated in pink.

Source: Authors (2016)

Figure 6: Average ranking position of teacher attributes (by teacher gender)

(1 = Highest rank position, 17 = Lowest rank position)*

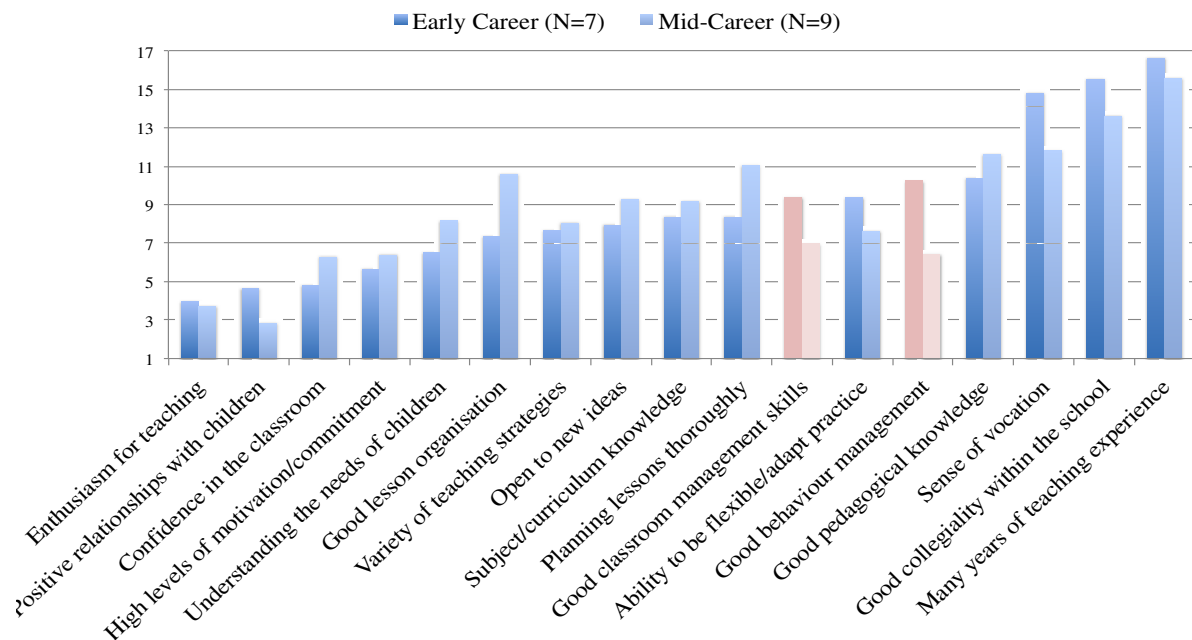


* Those constructs for which the difference across groups is large (Hedges' $g \geq .8$), are indicated in pink.

Source: Authors (2016)

Figure 7: Average ranking position of teacher attributes (by career teacher phase)

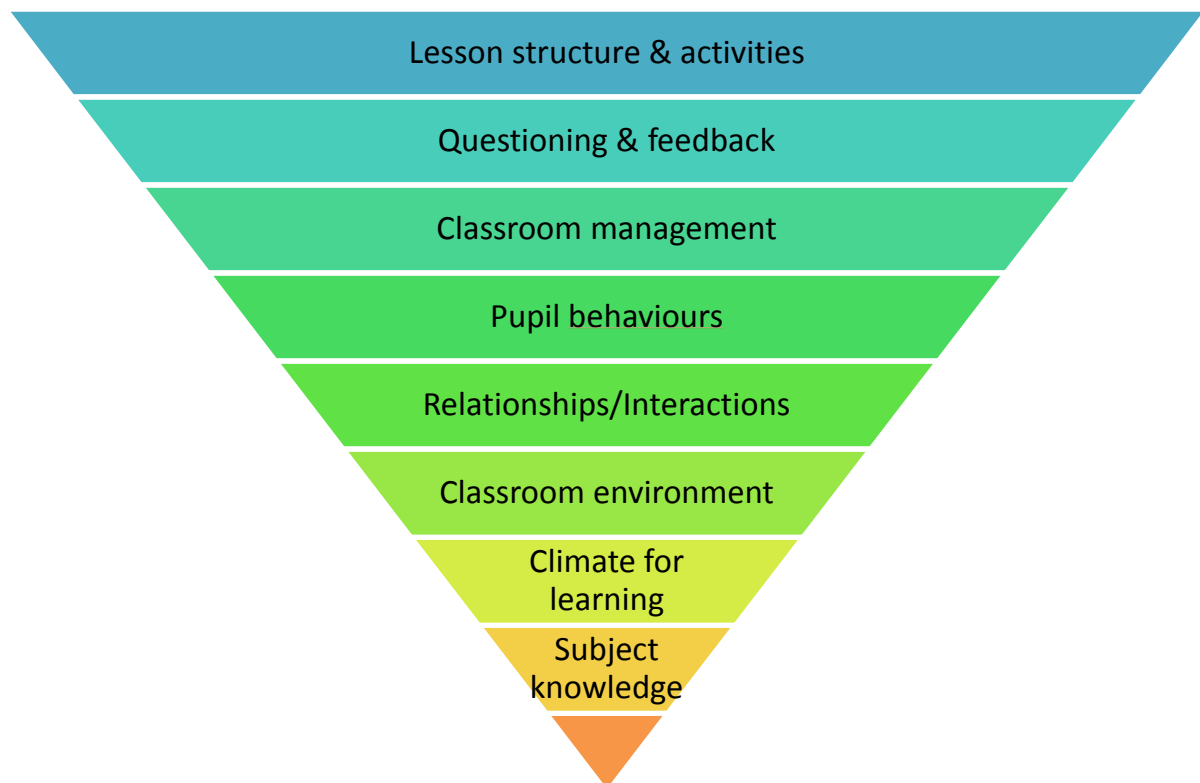
(1 = Highest rank position, 17 = Lowest rank position)*



* Those constructs for which the difference across groups is large (Hedges' $g \geq .8$), are indicated in pink.

Source: Authors (2016)

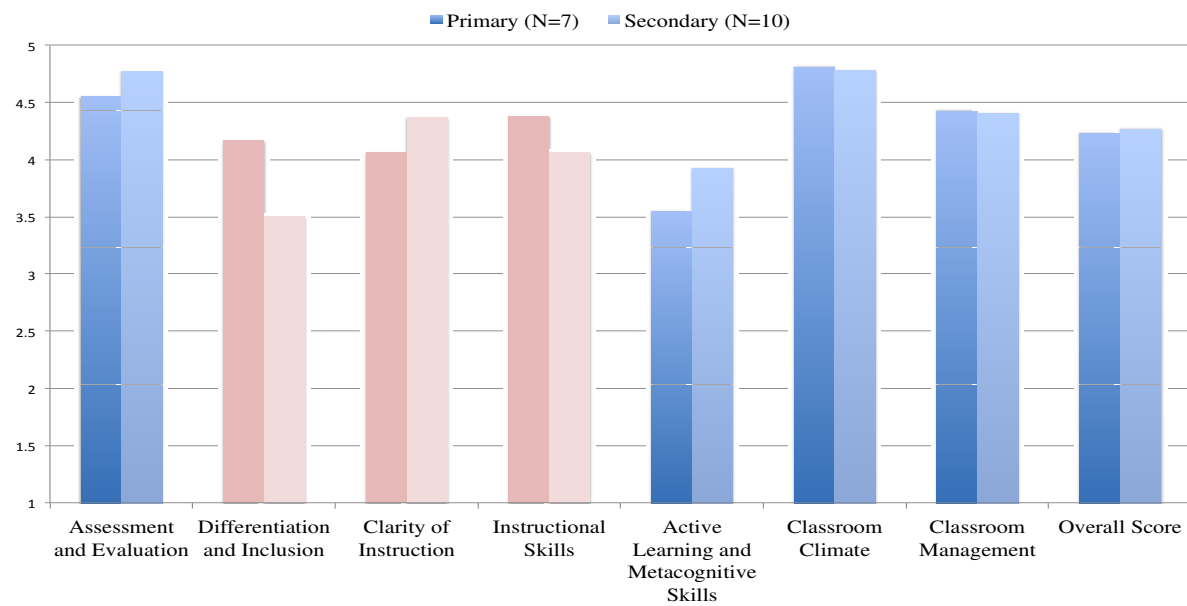
Figure 8: Major themes identified from qualitative observation data



Source: Authors (2016)

Figure 9:2 Average score of ISTOF dimensions (by school sector)

(1 = Lowest score, 5 = Highest score)*

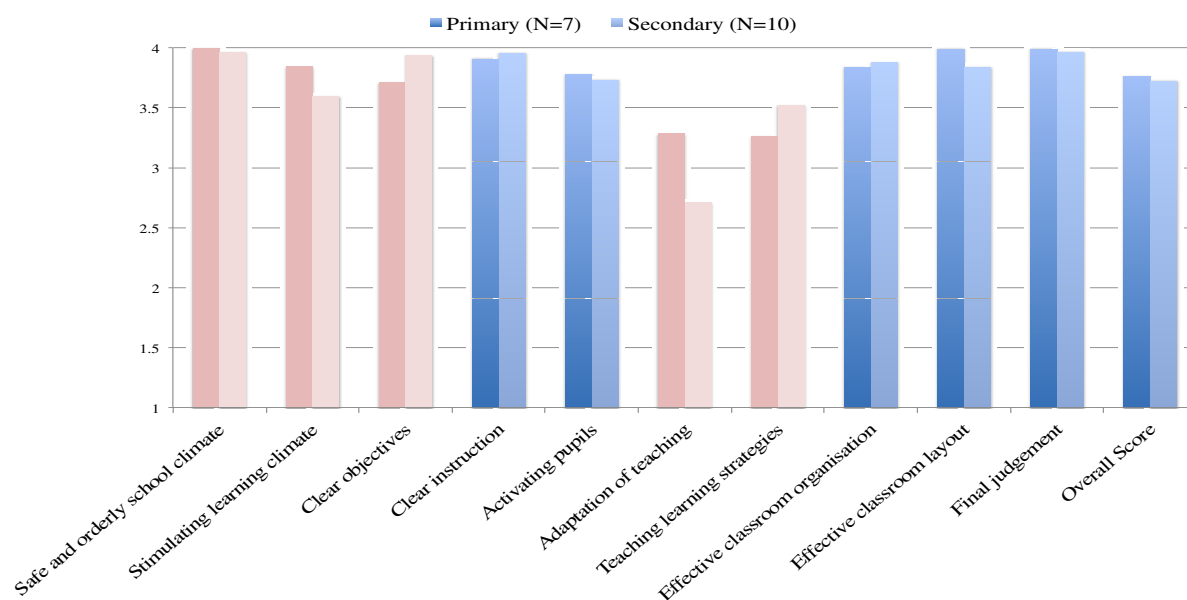


* Those constructs for which the difference across groups is large (Hedges' $g \geq .8$), are indicated in pink.

Source: Authors (2016)

Figure 10: Average score of QoT dimensions (by school sector)

(1 = Lowest score, 4 = Highest score)*

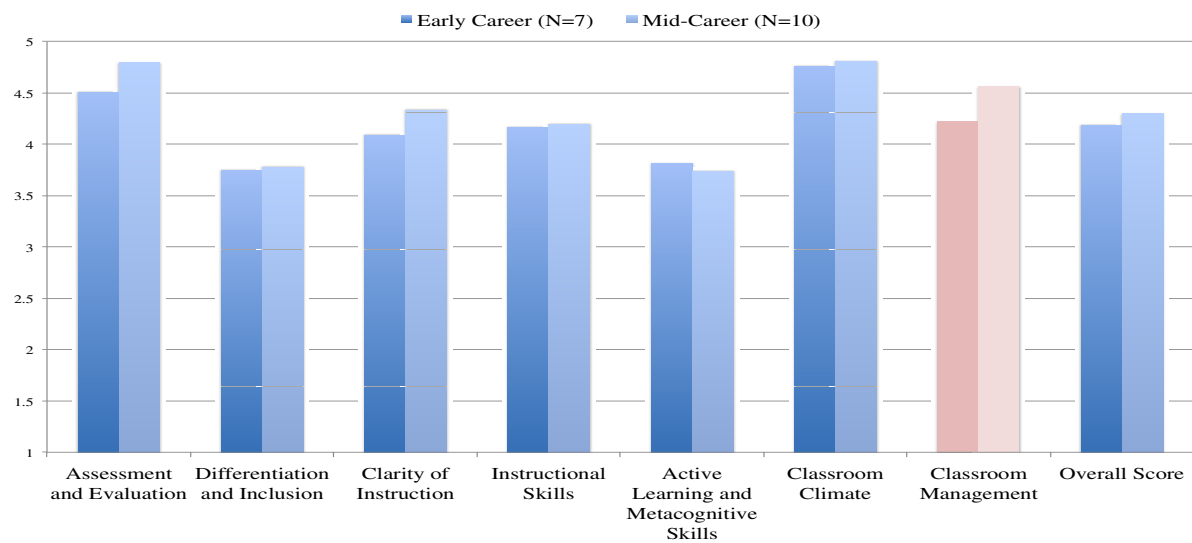


* Those constructs for which the difference across groups is large (Hedges' $g \geq .8$), are indicated in pink.

Source: Authors (2016)

Figure 11: Average score of ISTOF dimensions (by teacher career phase)

(1 = Lowest score, 5 = Highest score)*

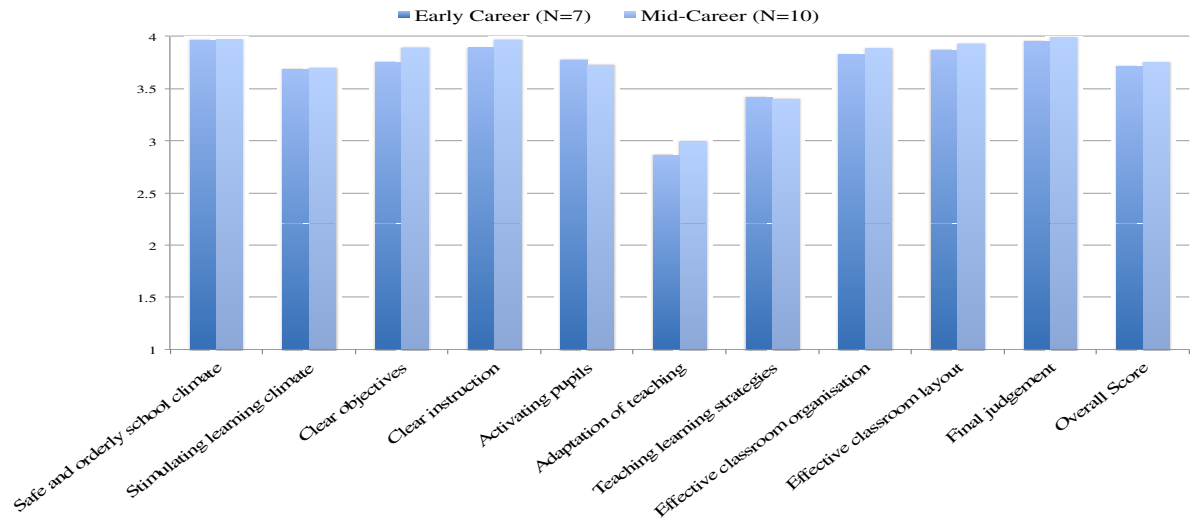


* Those constructs for which the difference across groups is large (Hedges' $g \geq .8$), are indicated in pink.

Source: Authors (2016)

Figure 12: Average score of QoT dimensions (by teacher career phase)

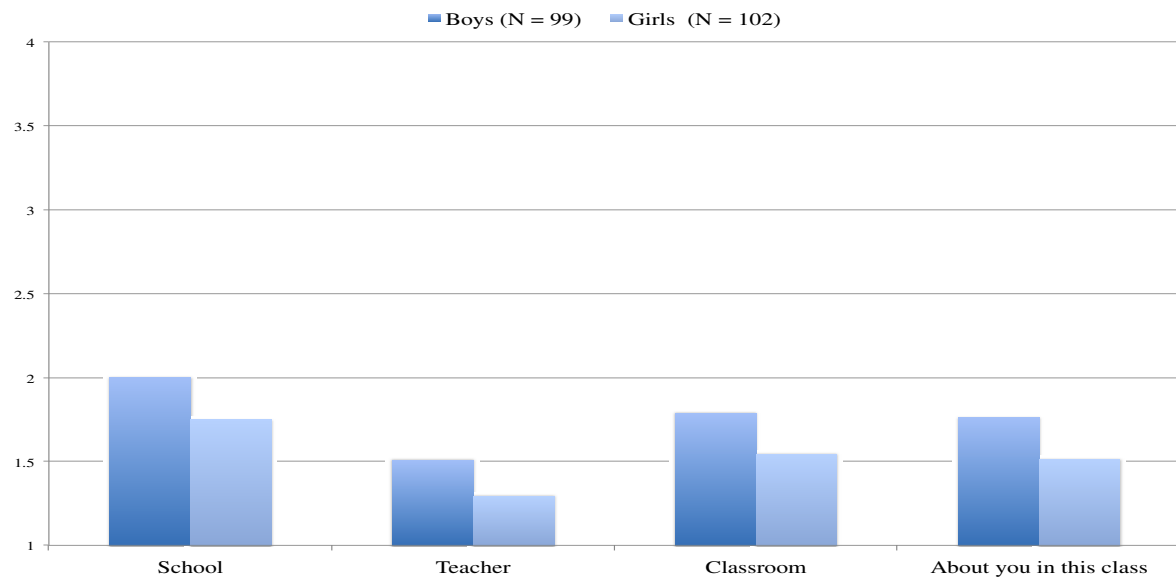
(1 = Lowest score, 4 = Highest score)



Source: Authors (2016)

Figure 13: Average score in student survey (by student gender)

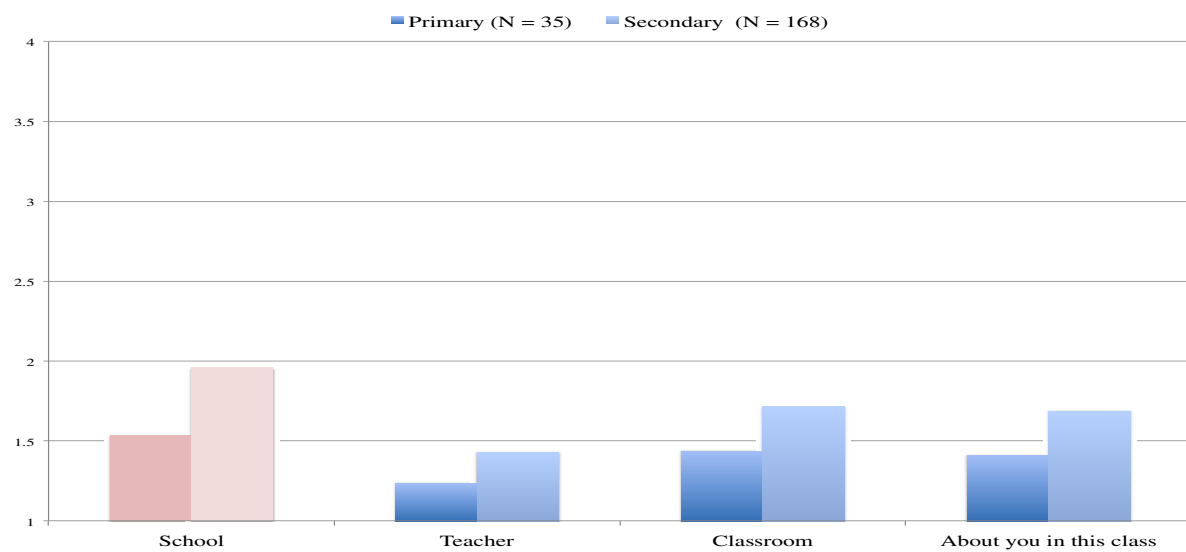
(1 = Highest score, 4 = Lowest score)



Source: Authors (2016)

Figure 14: Average score in student survey (by school sector)

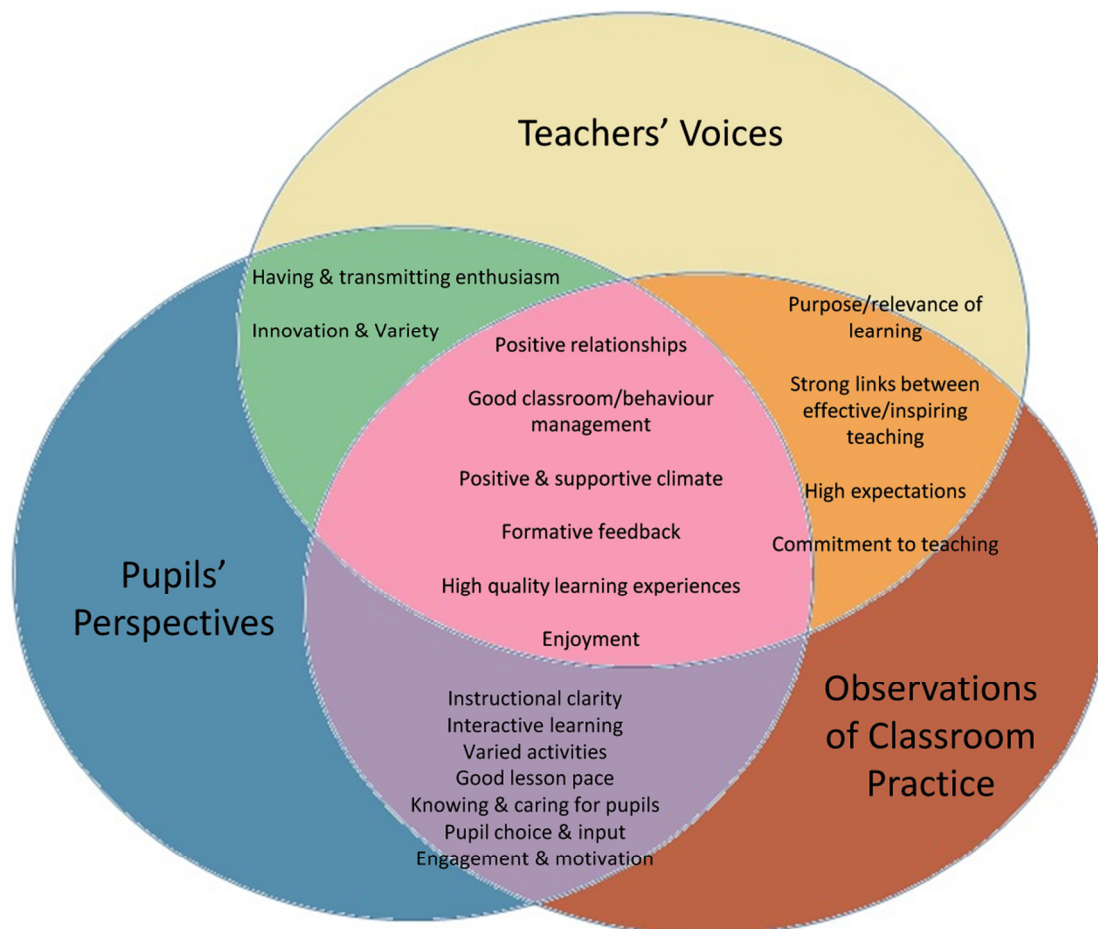
(1 = Highest score, 4 = Lowest score)*



* Those constructs for which the difference across groups is large (Hedges' $g \geq .8$), are indicated in pink.

Source: Authors (2016)

Figure 15: Synthesis of common analytical themes



Source: Authors (2016)

ISTOF Teacher Observation Protocol (2006 version)

The ISTOF Teacher Observation Protocol was designed by an international team of experts in the area of teacher effectiveness to measure observable teacher behaviours consistent with effective classroom teaching. Each observation should be conducted in a regular classroom setting and last for an entire class period (typically 40 - 50 minutes). The observer should rate each item according to the following rating scale.

5 – Strongly Agree

4 – Agree Somewhat

3 - Neutral

2 – Disagree Somewhat

1 - Strongly Disagree

NA - Not applicable/unable to observe

COMPONENT 1: ASSESSMENT AND EVALUATION

(1) Indicator #1.1: The teacher gives explicit, detailed and constructive feedback

Item #1: *The teacher makes explicitly clear why an answer is correct or not.*

5	4	3	2	1	NA
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>	<i>Not Applicable</i>

Item #2: *The teacher provides appropriate feedback to the answers given by the students.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(2) Indicator #1.2: Assessment is aligned with goals and objectives

Item #3: *Assignments given by the teacher are clearly related to what students learned.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #4: *The teacher explains how assignments are aligned to the learning goals of the lesson.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

COMPONENT 2: DIFFERENTIATION AND INCLUSION

(3) Indicator #2.1: The teacher creates an environment in which all students are involved

Item #5: *Students communicate frequently with one another on task-oriented issues.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #6: *All students are actively engaged in learning.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(4) Indicator #2.2: The teacher takes full account of student differences

Item #7: *The teacher makes a distinction in the scope of the assignments for different groups of students.*

5	4	3	2	1	NA
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>	<i>Not Applicable</i>

Item #8: *The teacher gives additional opportunities for practice to students who need them.*

5	4	3	2	1	NA
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>	<i>Not Applicable</i>

COMPONENT 3: CLARITY OF INSTRUCTION

(5) Indicator #3.1: The teacher shows good communication skills

Item #9: *The teacher regularly checks for understanding.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #10: *The teacher communicates in a clear and understandable manner.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(6) Indicator #3.2: Clear explanation of purpose

Item #11: *The teacher clarifies the lesson objectives at the start of the lesson.*

5	4	3	2	1	
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>	<i>t</i>

Item #12: *The teacher asks students to identify the reasons why specific activities take place in the lesson.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(7) Indicator #3.3: Lessons are well structured

Item #13: *The teacher presents the lesson with a logical flow that moves from simple to more complex concepts.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #14: *The teacher implements the lesson smoothly moving from one stage to another with well-managed transition points.*

5	4	3	2	1	NA
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>	<i>Not Applicable</i>

COMPONENT 4: INSTRUCTIONAL SKILLS

(8) Indicator #4.1: The teacher is able to engage students

Item #15: *The teacher provides sufficient wait time and response strategies to involve all types of learners.*

5	4	3	2	1	NA
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>	<i>Not Applicable</i>

Item #16: *The teacher gives assignments that stimulate all students to active involvement.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(9) Indicator #4.2: The teacher possesses good questioning skills

Item #17: *The teacher poses questions which encourage thinking and elicit feedback.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #18: *The length of the pause following questions varies according to the difficulty level of questions (e.g., a question calling for application of abstract principles requires a longer pause than a factual question).*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(10) Indicator #4.3: The teacher uses various teaching methods and strategies

Item #19: *The teacher uses a variety of instructional strategies during the class period.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #20: *The teacher uses different, appropriate instructional strategies for different groups of students.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

COMPONENT 5: PROMOTING ACTIVE LEARNING AND DEVELOPING
METACOGNITIVE SKILLS

(11) Indicator #5.1: The teacher helps pupils develop problem-solving and meta-cognitive strategies

Item #21: *The teacher invites students to use strategies which can help them solve different types of problems.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #22: *The teacher invites students to explain the different steps of the problem solving strategy which they are using.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #23: *The teacher explicitly provides instruction in problem-solving strategies.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(12) Indicator #5.2: The teacher gives students opportunities to be active learners

Item #24: *The teacher encourages students to ask one another questions and to explain their understanding of topics to one other.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #25: *The teacher gives students the opportunity to correct their own work.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(13) Indicator #5.3: The teacher fosters critical thinking in students.

Item #26: *The teacher motivates the students to think about the advantages and disadvantages of certain approaches.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #27: *The teacher asks the students to reflect on the solutions/answers they gave to problems or questions.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #28: *The teacher invites the students to give their personal opinion on certain issues.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(14) Indicator #5.4: The teacher connects material to students' real world experiences

Item #29: *The teacher systematically uses material and examples from the students' daily life to illustrate the course content.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #30: *Students are invited to give their own examples.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

COMPONENT 6: CLASSROOM CLIMATE

(15) Indicator #6.1: All students are valued.

Item #31: *The teacher demonstrates genuine warmth and empathy toward all students in the classroom.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #32: *The teacher shows respect for the students in both in his/her behaviour and use of language.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(16) Indicator #6.2: The teacher initiates active interaction and participation.

Item #33: *The teacher creates purposeful activities that engage every student in productive work.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

Item #34: *The teacher's instruction is interactive (lots of questions and answers).*

5	4	3	2	1
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

(17) Indicator #6.3: The teacher interacts with all students

Item #35: *The teacher gives turns to and/or involves those students who do not voluntarily participate in classroom activities.*

5	4	3	2	1
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

Item #36: *The teacher seeks to engage all students in classroom activities.*

5	4	3	2	1
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

(18) Indicator #6.4: The teacher communicates high expectations

Item #37: *The teacher praises children for effort towards realizing their potential.*

5	4	3	2	1
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

Item #38: *The teacher makes clear that all students know that he/she expects their best efforts in the classroom.*

5	4	3	2	1
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

COMPONENT 7: CLASSROOM MANAGEMENT

(19) Indicator #7.1: Learning time is maximized

Item #39: *Teacher starts lesson on time.*

5	4	3	2	1
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

Item #40: *Teacher makes sure that students are involved in learning activities until the end of the lesson.*

5	4	3	2	1
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

Item #41: *Actions are taken to minimize disruption.*

5	4	3	2	1	NA
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>	<i>Not</i>
<i>Agree</i>				<i>Disagree</i>	<i>Applicable</i>

(20) Indicator #7.2: Clear rules are evident

Item #42: *There is clarity about when and how students can get help to do their work in class.*

5	4	3	2	1
<i>Strongly</i>		<i>Neutral</i>		<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

Item #43: *There is clarity about what options are available when the students finish their assignments.*

5	4	3	2	1
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>

(21) Indicator #7.3: Misbehaviours and disruptions are effectively dealt with

Item #44: *The teacher corrects misbehaviour with measures that fit the seriousness of the misconduct (e.g., she does not overreact).*

5	4	3	2	1	NA
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>	<i>Not Applicable</i>

Item #45: *The teacher deals with misbehaviour and disruptions by referring to the established rules of the classroom.*

5	4	3	2	1	NA
<i>Strongly Agree</i>		<i>Neutral</i>		<i>Strongly Disagree</i>	<i>Not Applicable</i>

Appendix 2: QoT (van de Grift et al., 2004)

Indicator: The teacher ...		Grade ¹	Good practice examples: <i>The teacher ...</i>	Obs ²
Safe and orderly school climate	11	...ensures a relaxed atmosphere	1 2 3 4 ...addresses the children in a positive manner	0 1
			...reacts with humour and stimulates humour	0 1
			...allows children to make mistakes	0 1
	12	...promotes mutual respect	1 2 3 4 ...encourages children to listen to each other	0 1
			...intervenes when children are being laughed at	0 1
			...takes (cultural) differences and idiosyncrasies into account	0 1
	13	...supports the self-confidence of pupils	1 2 3 4 ...feeds back on questions and answers from pupils in a positive way	0 1
			...expresses positive expectations to pupils about what they are able to take on	0 1
	14	...shows respect for the pupils in behaviour and language use	1 2 3 4 ...allows pupils to finish speaking	0 1
			...listens to what pupils have to say	0 1
			...makes no role-confirming remarks	0 1
Stimulating learning climate	21	...ensures cohesion	1 2 3 4 ...honours the contributions made by children	0 1
			...ensures solidarity between pupils	0 1
			...ensures that events are experienced as group events	0 1
	22	...stimulates the independence of pupils	1 2 3 4 ...allows pupils to work independently on another assignment or to take up an individually selected task after completing an assignment	0 1

¹ Please circle the correct answer: 1 = predominantly weak; 2 = more weaknesses than strengths; 3 = more strengths than weaknesses; 4 = predominantly strong. Score only 3 when all good practice examples (if applicable) are really observed.

² Please circle the correct answer: 0= no, I didn't observe this; 1= yes, I have observed this.

				...allows pupils to work with self-correcting materials	0 1
				...has pupils working on daily and weekly tasks	0 1
	23	...promotes cooperation between pupils	1 2 3 4	...provides opportunities for pupils to help each other	0 1
				...gives assignments that incite cooperation	0 1
				...gives pupils the opportunity to play together or to carry out assignments together	0 1
	24	There is good individual involvement by the pupils	1 2 3 4	Pupils listen to the instructions actively	0 1
				Pupils take part in learning/group discussions	0 1
				Pupils work on the assignments in a concentrated and task focused way	0 1
Clear objectives	31	...clarifies the lesson objectives at the start of the lesson	1 2 3 4	... informs pupils at the start of the lesson about the aims of the lesson	0 1
				...clarifies the aim of the assignment and what the pupils will learn from it	0 1
	32	...evaluates whether the objectives have been achieved at the end of the lesson	1 2 3 4	...verifies and/or evaluates whether the aims of the lesson have been achieved	0 1
				...checks the pupils' achievements	0 1
Clear instruction	41	...gives clear instructions and explanations	1 2 3 4	...activates the children's prior knowledge	0 1
				...explains in sequential stages	0 1
				...asks questions that are understood by the pupils	0 1
				...summarises the lesson materials from time to time	0 1
	42	...gives clear explanations of the learning materials and the assignments	1 2 3 4	...ensures that every child knows what he has to do	0 1
				...clearly indicates the materials that can be used as learning aids	0 1

	43	...gives feedback to pupils	1 2 3 4	...checks whether pupils have understood the lesson materials when instructing the class	0 1
				...checks whether pupils are completing the assignments correctly	0 1
				...gives feedback on the way pupils arrive at their answers	0 1
				...gives feedback on the social functioning involved in the completion of the tasks (group work)	0 1
Activating pupils	51	...involves all pupils in the lesson	1 2 3 4	...gives assignments that stimulate pupils into active involvement	0 1
				...poses questions that initiate reflection	0 1
				...ensures that pupils listen carefully and keep on working	0 1
				...waits sufficiently long to allow children to reflect after posing a question	0 1
				...gives the opportunity to respond to pupils who don't put their hands up	0 1
	52	...makes use of teaching methods that activate the pupils	1 2 3 4	...makes use of conversational forms and discussion forms	0 1
				...provides graduated exercises	0 1
				...permits working in corners/groups	0 1
				...makes use of ICT	0 1
Adaptation of teaching	61	...adapts the instruction to the relevant differences between pupils	1 2 3 4	... allows pupils who need less instruction to commence with the work	0 1
				...gives extra instruction to small groups or individual pupils	0 1
				...does not direct himself exclusively to the middle bracket	0 1
	62	...adapts the assignments and processing to the	1 2 3 4	...makes a distinction in the scope of the assignments between individual children	0 1

		relevant differences between pupils		...does not give all children the same time to complete the assignment	0 1
				...allows some children to make use of auxiliary materials	0 1
Teaching learning strategies	71	...ensures that the teaching materials are orientated towards transfer	1 2 3 4	...teaches pupils solution strategies or search and reference strategies	0 1
				...teaches pupils the use of organisation resources	0 1
				...promotes the conscious use of what has been learned in other (different) areas of learning	0 1
	72	...stimulates the use of control activities	1 2 3 4	...gives attention to estimatory calculation/anticipatory reading	0 1
				...has solutions relate to the context	0 1
				...stimulates the use of alternative solutions	0 1
	73	...provides interactive instruction and activities	1 2 3 4	...facilitates mutual interaction between pupils	0 1
				...ensures interaction between pupils and the teacher	0 1
Effective classroom organisation	81	...gives a well structured lesson	1 2 3 4	...ensures clearly recognisable components in the lessons (lesson structure)	0 1
	82	...ensures the orderly progression of the lesson	1 2 3 4	Entering and leaving the classroom takes place in an orderly manner	0 1
				... intervenes in a timely and appropriate way to any order disruptions	0 1
				...acts as a 'watchdog' for agreed codes of behaviour and rules	0 1
	83	...uses learning time efficiently	1 2 3 4	There is no loss of time at the start, during, or at the end of the lesson	0 1
				There are no dead moments	0 1
				The children are not left waiting	0 1

	84	...ensures effective classroom management	1 2 3 4	... makes clear which lesson materials should be used	0 1
				The lesson materials are ready to use	
				The lesson materials are adapted to the level and the experience of the pupils	0 1
Effective classroom layout	91	...ensures that classroom layout supports the pupil activities	1 2 3 4	The furniture is easy to re-arrange	0 1
				The materials are easily accessible	0 1
	92	The teaching environment is educational and contemporary	1 2 3 4	The classroom décor supports the lesson activities	0 1
				The classroom is a linguistically challenging learning environment	0 1
Final judgement	10 0	I judge the overall quality of teaching as:	1 2 3 4		

TEACHER INTERVIEW

Preamble checklist:

- Thank the teacher for their time and continued support of the project.
- Outline the aims of this visit.
- Explain that the interview should last approximately 30 minutes and check that the timing is not a problem for her/him.
- Remind her/him that everything said remains confidential and that the names Local Authorities, teachers and schools will be anonymised for the purposes reporting and other publications.
- Ask permission for the interview to be recorded.
- Finally, ask if s/he has any questions before the interview begins and check that the teacher is happy to continue.

Prompts to be used if the teacher does not understand the question.

Probes to be used if the teacher does not answer the question fully.

A. Background information

1. What attracted you to teaching?

Probes

How did you become a teacher?
When did you decide to become a teacher?
Why did you decide to become a teacher?
What kind of training did you receive?
What were your first years teaching like?
How many years have you been teaching so far?
Have you moved schools? Why?
Have you had time out of teaching?

B. Inspiring teaching

1. Have you ever come across a teacher that inspired you? How would you describe them? How did they influence you? Do you remember a particular episode or aspect that reflects this?

Prompts

Do you know an inspiring teacher?
Where you particularly influenced by, for example, a teacher in your school years, a mentor, a peer, a teacher in your family, etc.?
What was particularly salient about these teachers?
What did you learned from them?

2. According to you, what makes an inspiring teacher?

Prompts

How would you define inspiring teaching?

C. Your role as a classroom teacher

1. We selected you because the headteacher suggests that you consistently demonstrate inspirational and effective practice in promoting student outcomes. What do you think accounts for this?

Probes

Please don't be modest, and tell me what are your main strengths as a teacher?
How has this changed and developed over time?

2. How would you describe your teaching approach?

Probes

How would you describe yourself as a teacher?
What are the important personal and professional skills that you bring to your classes?
What is the nature of the interactions between people in your class?
What would you describe as the main influences on your style of teaching?
How, if at all, has your style changed over the last three years?

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3. Could you briefly describe your main priorities with this class group since you have been in this role as classroom teacher?

Probes

Which, if any of your objectives have you achieved so far?

D. Classroom management

1. How would you describe the approaches to classroom management in this school?

Probes

Is there a common approach to classroom management in the school?

Does this approach vary by department?

Has it changed over time? If so, how?

2. How would you describe the behaviour of the students in this class?

Prompts

How do they compare to students in the school as a whole?

Are there any students with particular behavioural problems in the class?

3. How do you establish and maintain authority within this class?

Probes

Is this approach different from how you deal with other classes?

Is this approach suggested/supported by the school?

E. Teacher-pupil interaction and relationships

1. How have your relationships with these pupils developed during the year?

Probes

What do you think are the main reasons for this?

Do you think this is the case for the majority of teachers?

Prompt

How do other teachers convey this to you?

How do the pupils convey this to you?

Do you get feedback from the Head of Department/head teacher on this issue?

2. What do you think have been the major influences on the relationships with this class?

Prompt

School context / FSM / class size / gender ratio?

3. Can you tell me about the ability levels of the students in the class?

Prompts

Are they easy to teach?

Are there any students for whom English is not their first language?

Are there any students with learning disabilities, emotional or learning needs?

Are there any students with special needs in the class?

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4. How would you describe the climate for pupil learning in your classroom?

Probes

How is student learning promoted in this class?

Do you have any strategies to motivate students in their learning?

If yes, what? Is this a school-wide approach?

How does this approach compare to how learning is promoted within the school?

5. What factors in/outside the school affect the climate for pupil learning in your classroom? (e.g. environment (seating/wall space), resources, pupil behaviour)

F. Teacher effectiveness

1. In your opinion, what is it in or about this school that most influences teacher effectiveness?

Prompts

What support systems, policy or influences of leadership influence teacher effectiveness, like beliefs, values?

2. What are the key features of your teaching that help to improve student achievement?

3. Are there any specific areas of your teaching that you feel need addressing in relation to quality and effects on pupil outcomes?

Probes

Could you briefly describe your current developmental needs?

What are your plans in this area?

What types of support (formal and informal) do you receive as a teacher?

What CPD (formal learning) experiences, if any, are promoted amongst staff?

4. Do external policy agendas affect your classroom effectiveness?

Probes

If so, how?

How do you manage these?

G. Impact of support and teacher identity

1. Please could you comment on:

Your current level of motivation, commitment, and job satisfaction

Probes

In your opinion, has your motivation increased, decreased or stayed the same over the last three years?

What factors have caused this?

Are there any factors influencing the motivation of staff in the school?

Do you think there have been any consequences or implications of this in terms of your effectiveness as a teacher? If so, what?

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2. Do you feel able to help all your pupils to learn what is expected of them?

Probes

If not, why?

H. Professional Life Phase

1. We have developed six career phases for teachers (show diagrams and explain). They show the main influences on teachers at different stages of their careers with possible future trajectories.

- a) Which of these do you think best describes your current situation?
- b) Where do you think you may be heading in the next phase of your career?
- c) What are the main factors driving you in that direction?

2. Where do you see yourself in five years' time?

Probes

Career, motivation, morale, commitment, personal life, efficacy, emotions?

If teaching, what would you like to be doing?

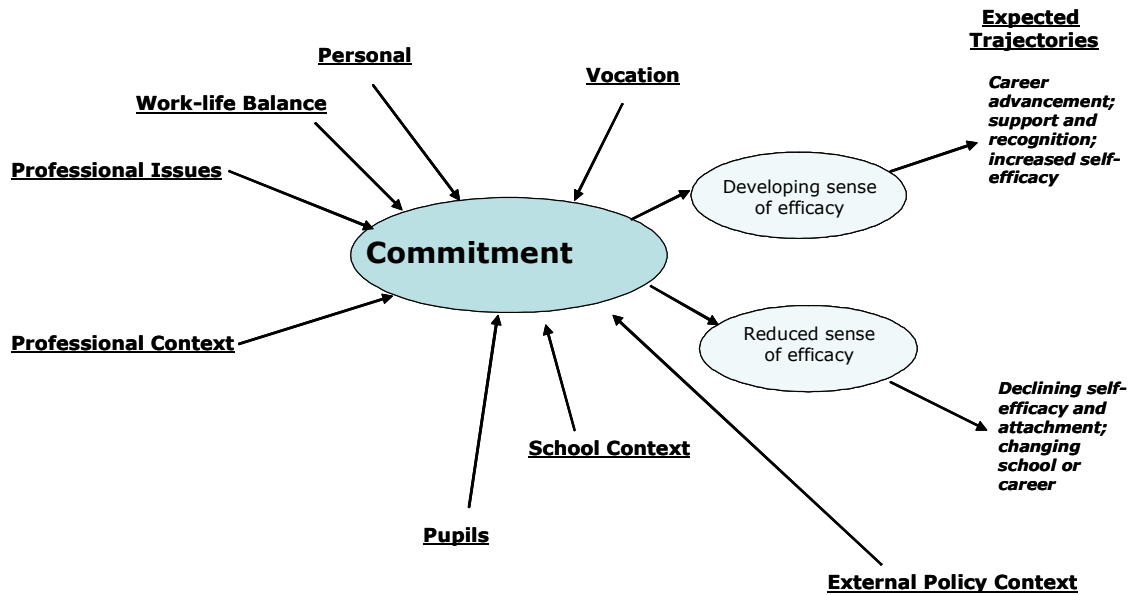
If not, what would you envisage doing?

Is there anything else you would like to add?

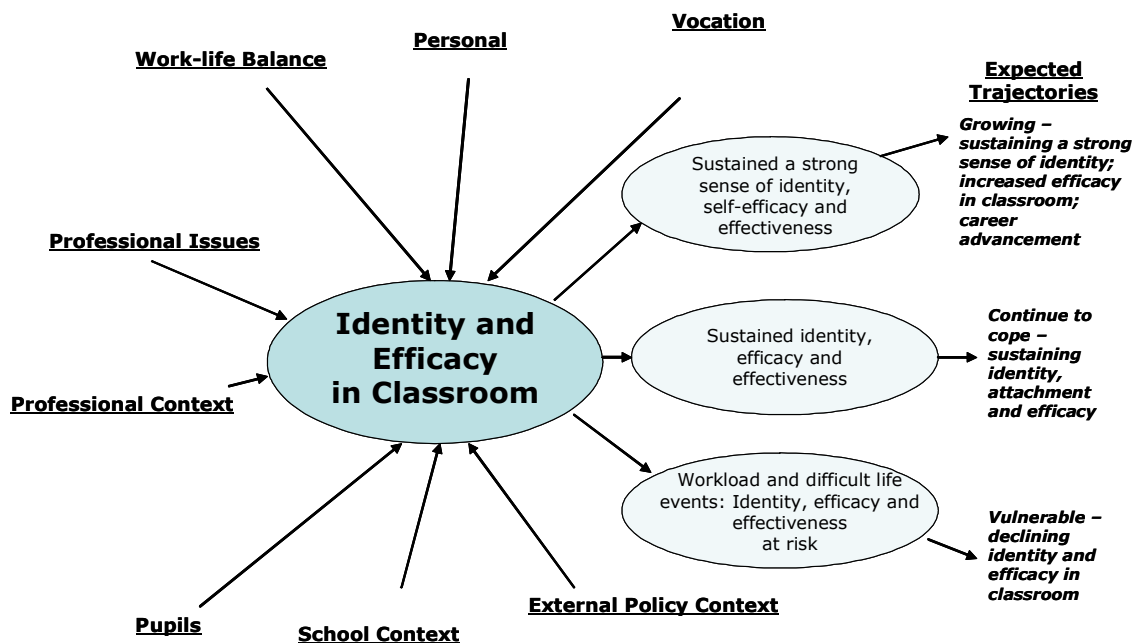
Do you have any questions or things you would like clarified while I'm here?

PROFESSIONAL LIFE PHASES

Career Phase 0-3

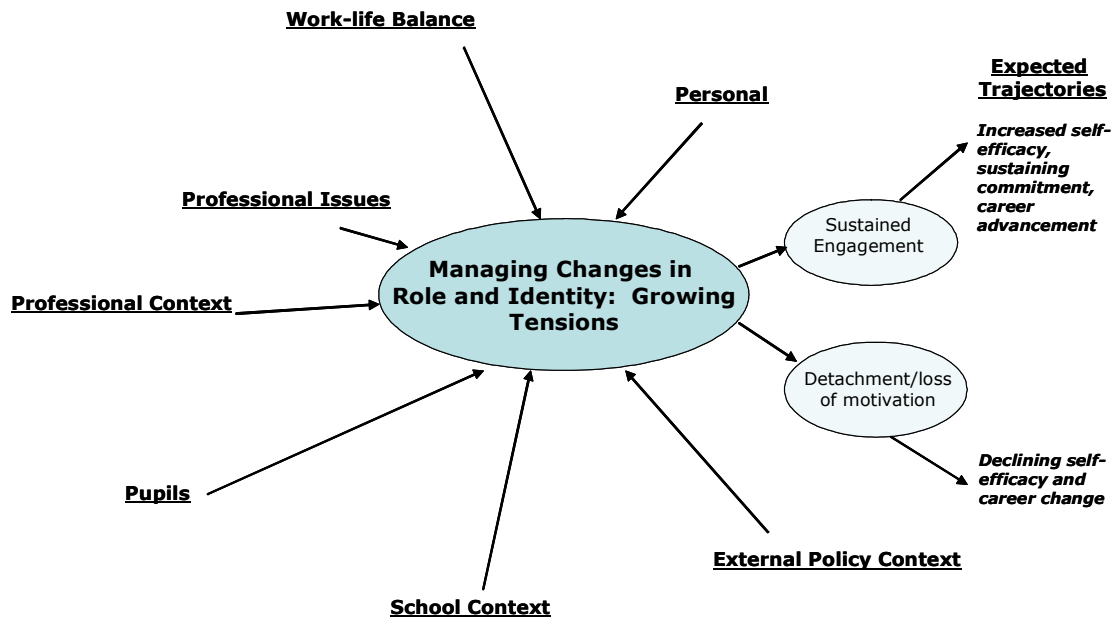


Teachers – Career Phase 4-7 Years

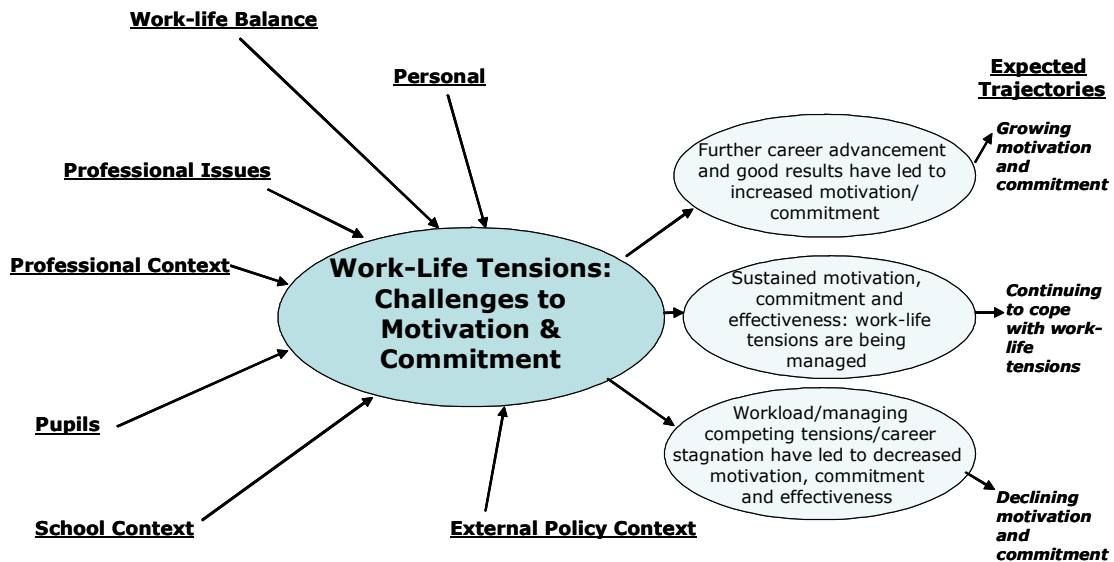


Inspirational and Effective Teachers (IET) Project

Teachers Career Phase - 8-15 Years



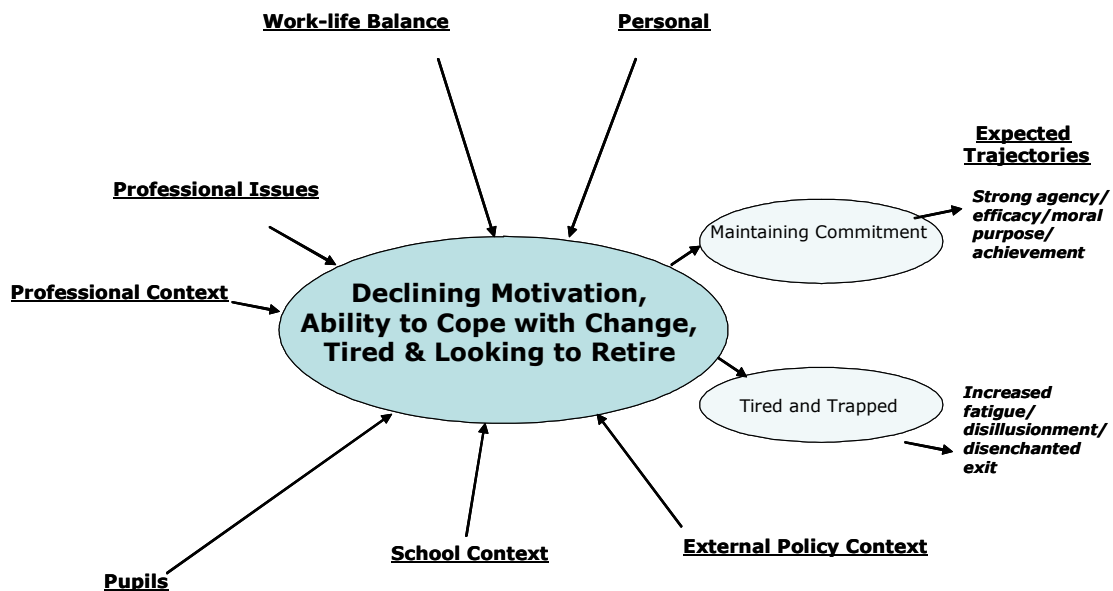
Teachers – Career Phase 16-23 Years



Teachers = Career Phase 24-30 Years



Teachers – Career Phase 31+Years



Context and Implications Document for: ‘It ain’t (only) what you do, it’s the way that you do it’: A mixed method approach to the study of inspiring teachers

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Sammons, P., Kington, A., Lindorff, A. and Ortega, L. ‘It ain’t (only) what you do, it’s the way that you do it’: A mixed method approach to the study of inspiring teachers, *Review of Education*

Author’s Introduction

This paper discusses findings from a small-scale study of ‘inspiring’ teaching commissioned by CfBT (now the Education Development Trust). Set within the context of changes in National Curriculum and assessment affecting schools in England at the time, it is based on case studies of a purposive sample of 17 primary and secondary teachers in England nominated by their head teachers who were interested in identifying and learning from inspiring teachers in their own school contexts. The research sought to understand what is meant by inspiring practice through drawing on different perspectives and sources of evidence. The equal status, mixed methods research design included integration of numeric and non-numeric data. This involved teacher interviews which covered views on inspiring teaching, teachers’ own practice, teacher identity and support, and future career plans. Teachers and head teachers also completed a ranking sheet based on a number of common constructs related to teaching. Two systematic protocols (the International System of Teacher Observation and Feedback (ISTOF) and the Lesson Observation Form for Evaluating the Quality of Teaching (QoT)) were also adopted, alongside the collection of detailed in-depth field notes. Finally, questionnaires were administered to the students of participating teachers.

Implications for Practice

A review of literature at the beginning of the study revealed that the terms ‘inspiring teaching’ and ‘inspiring teachers’ are ill defined. However, through the integration and synthesis of evidence from multiple perspectives (teachers’ voices, lesson observations and pupil perspectives), this exploratory study provided rich findings increasing understanding of the concept of inspiring practice and examined overlaps with evidence on effective teaching. Further studies in other contexts are needed to establish how far such findings might be more widely generalised. Nonetheless, the study provided insight into the definition of ‘inspiring teaching’, which has the potential to inform common understandings of these terms for practitioners as well as researchers in education.

1. Classroom practice

The study found that inspiring teachers show a high degree of engagement with their students, they are effective, organized and knowledgeable practitioners who exhibit a continued passion for teaching and for promoting the well-being of students. They are highly professional, confident and reflective practitioners. There was a strong emphasis on making learning enjoyable and engaging, activating students’ own motivation and classroom experiences were typically varied, imaginative and ‘fun’.

2. Importance of leadership and support

These inspiring teachers indicated that they valued the support they received from leaders and colleagues in their schools. They were keen to work with and support colleagues, often through their particular leadership roles in their schools. Despite external policy challenges, they seemed to genuinely like students, enjoy teaching, and showed resilience in the stressful and fast changing educational environment.

3. Professional development

In addition to increasing understanding of the concept of ‘inspiring’ teaching, results have implications for professional practice. Overall, the findings indicate that the inspiring teachers who participated in this study were committed professionals who continued to learn and improve their own practice through reflection and by seeking out opportunities and networks for professional development aligned to their needs and interests.

4. School leaders

Findings from the study emphasise the importance for those with leadership responsibilities in schools to foster professional learning communities in order to enhance the quality of learning and teaching, thus supporting school improvement.

Implications for Policy

The findings from the research have already fed back into CfBT (now EDT) in terms of their school improvement resources and approaches, and have implications for supporting teacher education, professional development and the creation of professional learning communities. In addition, the research provided vignettes and examples to help inform professional learning of relevance to teacher recruitment and retention.