

## Supporting and inhibiting the well-being of early career secondary school teachers: extending self-determination theory

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### Abstract

*This article reports an original examination of the well-being of early career secondary school teachers in England, which extends the evidence bases relating to early career teachers' working lives, teacher well-being, self-determination theory (Ryan & Deci, 2000), and performativity (Ball, 2003), respectively. Drawing on a secondary analysis of qualitative data generated for four separate empirical studies between 2005 and 2013, in a context in which teachers' work was subject to unparalleled external regulation, the authors examine the extent to which the well-being of early career teachers can be explained by self-determination theory, which posits that well-being is enhanced when innate psychological needs for competence, relatedness and autonomy are satisfied. The findings suggest that satisfaction of these three basic psychological needs is a necessary but not sufficient condition for optimising the well-being of early career teachers, which is dependent upon the interaction of a wider range of individual, relational and micro-, meso- and macro-environmental factors. Amongst the recommendations for policy and practice, policymakers and school leaders are urged to uphold their duty of care to newly and recently qualified teachers by doing their utmost to create conditions for the optimisation of their well-being. Several specific means of bringing this about are proposed, together with a checklist for those concerned to support early career teachers' well-being.*

**Keywords:** teacher well-being; early career teachers; self-determination theory; performativity

### Introduction

Research evidence suggests that the well-being of teachers is an important factor in teacher effectiveness (Day, 2008), teacher retention (Day & Kington, 2008) and the well-being of the students they teach (Kidger *et al.*, 2009; McCallum & Price, 2010). Studies also show that teacher well-being compares unfavourably with that of other professions (Bricheno *et al.*, 2009; Health and Safety Executive, 2015), and that occupational well-being is crucial for individuals' overall well-being (Prilleltensky, 2013), which – like others (e.g. Diener, 2000) – we consider to be an important goal in its own right. Despite this, the evidence base on teacher well-being is under-developed and under-theorised (Bricheno *et al.*, 2009), and there is a particular dearth of empirical research relating to the well-being of newly and recently qualified teachers, despite the crucial importance of the early, formative years in the profession for teacher effectiveness and retention as well as the development of teacher identity (Day *et al.*, 2007; Pearce & Morrison, 2011). In addition, despite a now extensive literature on the nature and impact of the standards-driven performativity agenda on schools (e.g. Ball, 2003; Nicholl & McLellan, 2008; Clapham, 2015), there has been a lack of attention to the implications of performativity for the well-being of teachers in general and early career teachers in particular.

Drawing on a secondary analysis of qualitative data generated for four separate empirical studies between 2005 and 2013, this article presents original findings on the extent to which self-determination theory (Ryan & Deci, 2000) can account for the factors which promote and inhibit the well-being of early career secondary school teachers (teachers of pupils/students aged 11-18). We use the term *early career teacher* (ECT) to refer to those in their first three years in the teaching profession following successful completion of a programme of initial teacher preparation (variously known as initial teacher education,

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initial teacher training, pre-service training, etc.). First year teachers are sometimes referred to as *newly qualified teachers* (NQTs), and second and third year teachers as *recently qualified teachers* (RQTs). Our conceptualisation of teacher well-being is discussed below, following an outline of the research, policy and cultural contexts in which the study is situated.

## Context

The emergent evidence base on school teachers' well-being suggests that this is shaped by a complex interplay of environmental or contextual factors on the one hand and individual teacher characteristics on the other. Most attention in the literature is focused on environmental and workplace specific factors, where studies suggest that teachers' well-being is most influenced by student behaviour (Bricheno *et al.*, 2009; Howard & Johnson, 2004), workload or pressure of work (Bricheno *et al.*, 2009; Aeltermann *et al.*, 2007), the extent to which teachers enjoy autonomy or control over their work (Bricheno *et al.*, 2009; Cenkseven-Onder & Sari, 2009), and the extent to which they experience positive, collegial relationships and support from colleagues and principals (Aeltermann *et al.*, 2007; Zhu *et al.*, 2011). Amongst the *individual* characteristics said to influence teachers' well-being, self-efficacy (Pillay *et al.*, 2005; Aeltermann *et al.*, 2007) and resilience (Howard & Johnson, 2004; Pretsch *et al.*, 2012) feature most strongly, while a small number of studies have found that characteristics such as gratitude and forgiveness are also influential (Chan, 2013). Despite this developing literature on the well-being of teachers in general, it is not clear to what extent these influences on teacher well-being apply to ECTs in particular: to date, no empirical studies have focused specifically on the well-being of newly and recently qualified teachers.

Research suggests that the well-being of teachers in England compares unfavourably with that of teachers in other countries (Bricheno *et al.*, 2009), and the specific context in England in the last 20 years is such that the well-being of teachers in general and ECTs in particular may indeed be expected to be under strain. England is one of an increasing number of countries to have embraced principles and practices associated with what academics have termed 'performativity' (Ball, 2003) and the 'global educational reform movement' (GERM) (Sahlberg, 2010), which is characterised by government control over the school curriculum and workforce, and by monitoring and 'inspection' of school and teacher effectiveness or 'performance'. These principles and practices are premised on the assumption that they will lead to school improvement and increased teacher effectiveness. And to the extent that these aims are achieved, these principles and practices might potentially have a positive impact on the well-being of teachers (at least of those remaining in the profession) if such teachers are more efficacious and aware of their influence on students' learning and achievements. However, this approach to achieving school improvement and teacher effectiveness will not necessarily have the desired impact – for a number of reasons. First, as Ball (1997) argued, the increased focus on the specification, collection and collation of indicators of performance, and on establishing and maintaining the infrastructure for inspecting, evaluating and reporting on schools' and teachers' performance against stated criteria, diverts a vast amount of time and resource away from – and which might otherwise have been invested in – the activities that are being measured. Secondly, it has been shown that performativity encourages the production of fabrications, in which schools (Perryman, 2009) and individual teachers (Hobson & McIntyre, 2013) seek to conceal perceived limitations in their practice: in doing so, they may render themselves less likely to receive the help and support they most need to address any such limitations and bring about school improvement and professional learning and development, respectively. Related to this, research has found that performativity can have a detrimental impact on workplace cultures and provoke anxiety, mistrust and increased competition amongst colleagues at the expense of positive interpersonal relationships, trust and collegiality (Jeffrey, 2002; Keddie *et al.*, 2011), all of which may inhibit teachers' well-being (Hargreaves, 2007). Furthermore, the current context may impede teachers' well-being by restricting another key consideration which is said to promote it, namely teacher autonomy (Burnard & White, 2008): several writers (e.g. Goodson, 2003; Day & Gu, 2007) have argued that the implementation of principles and processes that have been conceptualised as GERM and performativity have undermined teacher agency and encouraged uncritical compliance with policy agendas and imposed pedagogical approaches and curricula.

The current schooling context could be seen to pose additional challenges for the well-being of ECTs, whose 'performance' is subject to even more intense scrutiny than that of other teachers. Having successfully completed a programme of initial teacher preparation, NQTs are monitored closely by their school, and their teaching is regularly observed and evaluated in an attempt to ensure that they are meeting the required standards (Department for Education, 2015). Even before these relatively recent threats to the well-being of ECTs, and in a variety of contexts, research had found the early years of teaching to be characterised by intense pressure and sometimes disillusionment (Veenman, 1984; Gold, 1996, Bullough, 2009).

### **Conceptual framework**

Given the research, policy and cultural contexts set out above, we considered it important to seek to address the current gap in the evidence base and examine factors impacting the well-being of ECTs. Prior to the second decade of the 21<sup>st</sup> Century, very few studies in the broad area of teacher well-being explicitly focused upon and / or defined teacher well-being itself, and most implied a definition that rested on the absence of negative emotional states, stress or burnout (Bricheno *et al.*, 2009; Goddard *et al.*, 2006). Relatively few researchers, such as Aelterman *et al.* (2007), defined well-being as a positive emotional state and explored factors which had a positive effect on teacher well-being. However, since research has found that factors associated with positive and negative affect are relatively independent and only weakly and inversely related (Albuquerque *et al.*, 2012; Headey *et al.*, 1984), we consider that studies which focus solely on negative *or* on positive emotional states of mind are equally limited to providing a partial understanding of teachers' well-being. We thus conceptualise teacher well-being as a holistic and multi-dimensional construct which incorporates both positive and negative affect (Albuquerque *et al.*, 2012; Dodge *et al.*, 2012). We define teacher well-being as a *positive emotional state in which positive affect and satisfaction associated with the experience of teaching and being a teacher outweigh negative affect and dissatisfaction.*

Given a socio-historical context in which teachers' work has been subject to a greater degree of external control than ever before (Jeffrey & Troman, 2012), and in which ECTs have been subject to especially high levels of monitoring, assessment and external control, we hypothesised that self-determination theory (SDT) (Ryan & Deci, 2000), a highly influential theory of human motivation and well-being which "focuses especially on volitional or self-determined behaviour and the social and cultural conditions that promote it" (Ryan, 2009, p.1), might provide a particularly apposite analytical framework for understanding factors which impact on the well-being of ECTs.<sup>1</sup> According to SDT, for which previous research has provided much empirical support (e.g. Vallerand *et al.*, 2008; Niemiec & Ryan, 2009; Molix & Nichols, 2013), motivation and well-being are enhanced when innate psychological needs for competence, relatedness and autonomy are satisfied, and diminished when such needs are thwarted (Ryan & Deci, 2000). Competence relates to the sense of efficacy individuals have in relation to the various tasks in which they are engaged; relatedness to the feeling that one is closely connected to or cared for by others; and autonomy to the experience of volition that can accompany an act, as opposed to that of external control.

SDT comprises five subtheories' (Ryan, 2009, p.1), of which two are especially relevant to the present study. The first, Basic Psychological Needs Theory (BPNT) holds that "the impact of any behaviour or event on well-being is largely a function of its relations with need satisfaction" (Ryan, 2009, p.2), and that each need exerts an independent effect on wellness. That said, the three basic needs in SDT have also been found to be to some extent interdependent (Ryan & Deci, 2000, 2001). The second SDT subtheory we wish to highlight is Organismic Integration Theory (OIT). In general, well-being has been found to be facilitated more by intrinsic motivation (engaging in an activity "for the inherent satisfaction of the activity itself") than by extrinsic motivation ("the performance of an activity in order to attain some separable outcome") (Ryan & Deci, 2000, p.70). Yet SDT – and OIT in particular – posit that extrinsic motivations can nonetheless enhance rather than detract from an individual's well-being to the extent that they are internalised. External motivations may thus range from 'external regulation', their least autonomous form (such as acting to avoid pain or gain a reward), through 'introjected regulation' and 'identified motivation' to their most autonomous form, 'integrated motivation', in which regulations are

fully assimilated and become congruent with an individual's other values (Ryan, 2009; Forgeard *et al.*, 2011).

It should be noted that Ryan and Deci do not claim that satisfaction of basic psychological needs for competence, relatedness and autonomy provides an *exhaustive* account of the factors contributing to well-being; and nor do they outline what they might consider to be additional contributory factors. We sought to cast further light on this issue by examining the extent to which competence, relatedness, autonomy and other considerations appeared to shape the well-being of ECTs in England during the second half of the first decade and early years of the second decade of the 21<sup>st</sup> Century.

## Methodology

The findings reported in this article are based on a secondary analysis of qualitative data (Heaton, 2004; Seale, 2011) generated between 2005 and 2013 for four separate studies in England. Secondary analysis involves the utilisation of existing data, generated for the purposes of one or more prior studies, "in order to pursue a research interest which is distinct from that of the original work" (Heaton, 1998, 1). The secondary analysis of qualitative data creates the potential for researchers to generate new knowledge, re-examine existing theories and develop new hypotheses while reducing burdens on (prospective) research participants (Hinds, Vogel and Clarke-Steffen 1997; Heaton, 1998).

The use of secondary data analysis of data has been subject to critique on a number of grounds, in particular that secondary analysts may lack sufficient contextual information for effective data re-use, and that the primary data may be incompatible with the research aims of the new study (Heaton, 1998; Irwin & Winterton, 2011). In the present study, the first issue was mitigated through our role as lead investigators of the primary studies. With respect to the second issue, while the four studies in question were carried out to explore different research aims, mostly focused on ECTs' professional learning and development, we were aware through our involvement in the projects that each of the datasets provided valuable insights into factors associated with the well-being of ECTs. This was confirmed by an initial exploratory examination of two of the datasets, designed to assess their fitness for purpose for the proposed secondary analysis (Maxwell, Hobson & Ashby, 2013), and by our subsequent analyses, reported below.

All four primary studies included ECTs from secondary schools, while two also included ECTs from primary schools. In this article, we focus on the well-being of early career secondary teachers. Below, we outline the four studies and the datasets drawn upon for our secondary analysis. A summary overview is provided in Table 1.

**Table 1: Summary of data sources**

Project Number	Project Name	Data source	Year of data collection	Number of participants	Number of transcripts
1	Becoming a Teacher	Interviews	2005-2007	5	15
		Ejournals	2005-2007	10	45
2	NQT Quality Improvement Study	Interviews	2008-10	5	15
3	Modes of Mentoring and Coaching Project	Interviews	2010-11	18	18
4	External Mentoring Pilot Project	Start of programme and mid-year surveys	2012-13	5	10
		Focus Groups	2013	3*	2
<i>Total</i>				<i>43</i>	<i>105</i>

\* The three focus group participants also completed the survey.

The first study ('Project 1') was the longitudinal, equal status mixed method (Tashakkori & Teddlie, 1998) 'Becoming a Teacher' (BaT) project, the main aim of which was to explore primary and secondary teachers' experiences of initial teacher preparation, induction<sup>2</sup> and early professional development. (For details of the methodology of the original project, see Hobson *et al.*, 2009). For the

present study, we randomly selected two groups of BaT participants. Firstly, we selected five (two female and three male) out of 24 secondary teachers who had participated in semi-structured face-to-face interviews at the end of each of their first, second and third years in teaching – a total of 15 interviews. The annual interviews were wide-ranging in affording participants opportunities to reflect on their lived experience of becoming and being a teacher during the preceding year. Secondly, we selected 10 (different) participants (5 female, 5 male) out of 18 secondary teachers who participated in 'ejournals' with the research team throughout the same period. The ejournals involved participants being contacted by email approximately once every half term and invited to respond to a small number of open-ended questions including ones which asked them to provide details of any high or low points that they had experienced or were experiencing. The 10 ECTs selected for our secondary analysis had engaged in email correspondence on between 2 and 7 occasions over their first three years in teaching – a total of 45 email exchanges.

The second project from which data were reanalysed ('Project 2') was the equal status mixed methods *NQT Quality Improvement Study*, which examined: factors that impacted on the recruitment, retention and performance of teachers in their first three years of teaching; senior leader needs in relation to high quality ECTs; and the ways in which schools measure the progression of ECTs (see Coldwell *et al.*, 2011). For the present study, to match the first dataset analysed from the BaT project, we randomly selected five (3 female, 2 male) out of 23 secondary teachers who had participated in semi-structured face to face interviews at the end of each of their first, second and third years in post – again, a total of 15 interviews. The ECT interviews, which formed part of school case studies, focused on their experiences of recruitment, teaching and support for their professional learning and development, as well as their attitudes towards teaching and their career plans.

Project 3 was the equal status mixed method *Modes of Mentoring and Coaching Project*, which explored the nature and impact of mentoring and coaching provided for teachers of secondary science in England by non-school based or 'external' mentors or coaches associated with three different support programmes (see Hobson *et al.*, 2012). For the present study, we re-analysed transcripts of stand-alone interviews with ECTs who had been involved in two out of the three programmes, the pilot *Physics Enhancement Programme* (in which ECTs were supported by 'Regional Mentors'), and the *Stimulating Physics Network* (in which support for teachers was provided by 'Teaching and Learning Coaches').<sup>3</sup> For the Modes of Mentoring and Coaching Project, interviews were conducted with nine ECTs from the *Stimulating Physics Network* (8 female, 1 male), and all of these were re-analysed for the present study. To match this, we employed random stratified sampling to select 5 female and 4 male ECTs who had worked with *Physics Enhancement Programme* Regional Mentors, from the 19 (10 female, 9 male) interviewed for the original study

The fourth dataset analysed for the present study was generated for an unpublished evaluation of an External Mentoring Pilot Project undertaken at a university in the north of England, in partnership with local schools, in 2012-13 ('Project 4'). The project, informed by the *Modes of Mentoring and Coaching* research, involved the part-time appointment of an experienced English teacher and teacher educator to provide support to trainee and qualified teachers of secondary English who were working in different schools in the region. The external mentor provided support to 10 participants in total, five of whom were first, second or third year teachers. For the evaluation, data were generated by surveys and focus groups. First, surveys comprising open-ended questions were administered to participants both at the beginning of the programme, focusing on their support needs, and mid-way through the programme, focusing on the nature and impact of the external mentor support provided to date. Secondly, two mentee focus groups were conducted at the end of the programme, in which participants were invited to discuss the nature and impact of the external mentor support, and factors which promoted or inhibited their professional learning, development and well-being more widely. Only data generated from the five ECTs (4 female, 1 male) – all five of whom provided written responses to each survey, and three of whom participated in one or other focus group – were re-analysed for the present study.

In total, for the present study, 105 transcripts were re-analysed, from 43 ECTs (27 female, 16 male) who were geographically dispersed in different parts of England. All transcripts were imported into MAXQDA10 qualitative data analysis software, in which they were subjected to a thematic content analysis (Braun & Clarke, 2006). A coding frame, structured using the key premises of self-determination

theory outlined earlier, was developed and applied consistently across all datasets to seek to establish the extent to which relatedness, competence, autonomy and any other considerations were identified by ECT participants as positively or negatively influencing their well-being. Hence, any statements by participants which were judged to identify factors influencing their well-being as teachers were coded into one or more of eight categories<sup>4</sup>: 'relatedness-positive', 'relatedness-negative', 'competence-positive', competence-negative, 'autonomy-positive', 'autonomy-negative', or – in cases where the influencing factors were judged not to relate to any of the three core SDT concepts – as 'other-positive' or 'other negative'. The first author coded all transcripts and the second author coded approximately 50 per cent of the transcripts. With respect to the 50 per cent of transcripts coded by both authors, the inter-coder agreement on the allocation of text to the eight broad categories listed above was 93 per cent. We subsequently re-examined all coded segments, agreed how any anomalies would be recoded, and identified and agreed sub-categories of the 'other' (non-SDT) factors influencing ECTs' well-being.

Like the four separate research projects from which data were re-analysed, this study was conducted, and findings are presented, in accordance with the ethical guidelines of the British Educational Research Association (BERA, 2004, 2011). For each quotation provided below to illustrate and evidence our findings, we give the gender and early career stage (first, second or third year of teaching) of the teacher concerned, and the specific dataset from which the data were derived.

## Findings

Our analyses revealed that participants in all four projects spoke or wrote about their experiences in ways which provided rich insights into the nature and causes of their well-being as teachers. This was evident, for example, in frequent references to 'enjoying', 'loving' and 'being happy' about teaching on the one hand, and to being 'upset', 'stressed', 'miserable' and 'hurt by' experiences of teaching and being a teacher on the other. Only one of the 43 ECTs in our sample was judged not to have provided any such insights. Across the 105 transcripts analysed, we coded 513 segments of text in which ECTs gave insights into factors influencing their well-being as teachers, with most participants referring both to factors which enhanced *and* those which detracted from their well-being. In what follows, we first provide a quantitative overview of our coding, before developing and illustrating our findings by drawing upon ECTs' qualitative accounts of their experiences. We discuss, in turn, relatedness, competence, autonomy and then various other factors which our analyses suggest impact on the well-being of ECTs but are less easily attributable to these three basic psychological needs.

### *Factors supporting and inhibiting ECTs' well-being: the significance of competence, relatedness and autonomy*

As Table 2 shows, nearly all participants (41 out of 43; 95%) indicated that the quality of their work-based relationships (relatedness) had a positive and/or negative influence on their well-being as teachers, while most participants (35 out of 43; 81%) also indicated that their perceptions of their competence did so. A relatively small but not insignificant number of participating teachers (18 out of 43; 42%) indicated that the perceived presence or absence of autonomy had a positive or negative influence on their well-being.

On the other hand, the right hand column of Table 2, which takes account not only of the numbers of participants referring to specific factors impacting on their well-being but also of the total number of references participants made to such factors, shows that only six per cent of all coded segments (i.e. all text highlighting positive or negative influences on well-being) relate to autonomy, compared with 36 per cent for relatedness and 28 per cent for competence. These data also show that, together, relatedness, competence and autonomy account for 71 per cent of all coded segments, while 29 per cent of coded segments (based on the accounts of 36 of the 43 participants) relate to influences on ECTs' well-being which we judged to be outside of the three basic psychological needs identified in SDT.

**Table 2: Factors influencing early career secondary teachers' well-being**

		Number (%) of participants	Number (%) of coded segments
<b>Relatedness</b>	Promote well-being	35	130
	Impede well-being	23	57
	Total relatedness	41 (95%)	187 (36%)
<b>Competence</b>	Promote well-being	31	110
	Impede well-being	14	35
	Total competence	35 (81%)	145 (28%)
<b>Autonomy</b>	Promote well-being	14	20
	Impede well-being	8	10
	Total autonomy	18 (42%)	30 (6%)
<i>Total Relatedness, Competence and Autonomy</i>		43	362 (71%)
<b>Other factors</b>	Promote well-being	28	73
	Impede well-being	23	78
	Total other factors	36 (84%)	151 (29%)
<i>Total</i>		43	513

#### *Relatedness*

As Table 2 suggests, the presence, absence, nature and intensity of teachers' social connections to significant others<sup>5</sup> in and around schools ('relatedness') was found to be the single most prominent factor both enhancing and impeding ECTs' well-being. Relatedness manifested itself in a variety of ways, most commonly through positive relationships with students (both in the classroom and via extra-curricula activities) and through connectedness to teacher colleagues, notably through collegiality and collaborative working, through mentors', line managers' and other colleagues' support and care, and through the cultivation of friendship networks. The following excerpts from an interview with one teacher are illustrative of relatedness enabling well-being:

*At Christmas, completely unbeknown to me, two of my classes organised presents for me and that was one of my biggest highs because I'd only been in the school a term and ... it meant so much to me... [And m]y head of department has been absolutely wonderful... I've been able to go to him and say "I need this, I need that" and whenever he can, has sorted it out for me... sometimes we'd just sit and talk ... And that really has helped me... (First year female; Project 1 interview)*

As a factor inhibiting ECTs' well-being, several participants bemoaned the absence of connectedness or the presence of toxic relationships with significant others, mostly (again) students and / or colleagues but occasionally others such as students' parents. We illustrate the point with quotations from two (different) female teachers reflecting on their first year in post:

*There were at least six notorious... 'gentlemen' – they weren't very gentle! ...I nearly walked out a couple of times actually.... They were very good at getting under the skin and humiliating me in front of the class. They had me in tears a couple of times... (First year female; Project 1 interview)*

*I went to see my mentor the second week I'd been here. I was struggling, I was really upset and to be honest I was close to quitting. I said "I could do with speaking to you." She told me she was too busy and I'd have to hold on for half an hour. I hung around for half an hour and went back, she was still too busy to deal with me so could I come back later. I went back later, she opened the door and her exact words to me were "you obviously need more help, what do you want?" I turned round and told her I didn't need anything and walked off. At this point I was beyond angry. (First year female; Project 1 interview)*

### *Competence*

Early career teachers' perceptions of their competence (or increased competence) sometimes related to teaching in general, and sometimes to specific aspects of being a teacher such as classroom or behaviour management, subject knowledge and pedagogy, lesson planning, time and workload management, examination success or other achievements of their students, and the organisation of extra curricula activities. Sometimes perceived competence related to feelings of enhanced 'teacher status' resulting from successfully completing their NQT induction and being confirmed and affirmed as a fully qualified teacher, being given increased responsibility or achieving promotion and career progression. Often more than one of these factors was at play:

{Have you experienced any particular highs or lows since our last contact?} *West Side story was a HUGE success! Then [I] was offered [a] Head of Department [position]. And Ofsted<sup>6</sup> gave us an 'Excellent' [rating] and stated my lessons were of an 'exceptionally high standard' and that I was an 'Excellent Practitioner'... [You] can't get much higher!* (First year male; Project 1 ejournal)

Participants questioned their competence or effectiveness as teachers, to the detriment of their well-being, where there was an absence of some of the sources of affirmation identified above, where they doubted their ability to demonstrate expected levels of performance or felt they had not had sufficient impact on students' examination results, and where they were self-critical of aspects of their work, such as their classroom and behaviour management or their subject knowledge:

[T]here have been a lot of lows... when I cannot control a class... *Consequences – feelings of inadequacy particularly regarding behaviour management, self-esteem lowered, doubts about ability and choice of profession. The family suffer as I am thoroughly miserable...* (First year female; Project 1 ejournal)

Our analyses suggest that observation of ECTs' lessons for quality assurance purposes can have profound negative as well as potentially positive effects on their well-being, via its impact on their own or their awareness of others' perceptions of their competence:

[Lesson] observations... have the power... to make me feel like utter trash... *And when we had our quality assurance this year it was actually ridiculous that on the first day... I was like crying, saying "I don't want to do this job if I'm just adequate; I'm not doing it anymore"... That's an incredibly ... negative impact on me personally.* (Second year female; Project 4 focus group)

### *Autonomy*

When participants indicated that opportunities to exercise autonomy had had a positive impact on their well-being, they mostly talked (or wrote) about reductions in the degree of observation and assessment to which they had previously been subject as student teachers or NQTs, about having more freedom to teach lessons in *their* way, and about having increased influence and decision-making capacity within their schools:

[My Head of Department] is a very flexible manager of people and she says "Look, you're a professional. You know what you have to do. Obviously these are my schemes of work, however you're a professional and you're mature enough to do what you think is best," and it works very well for us as a department. *I think that's one of the things that keeps us happy and together...* (Third year male; Project 2 interview)

Conversely, a minority of ECTs indicated that their well-being was detrimentally impacted by having too little choice or control over aspects of their work. In particular, some were frustrated by requirements to teach or structure their lessons in certain ways, or by school processes which constrained their capacity for independent action:



[Lows include] ...*the amount of 'things to consider' [including] constantly [being required to] teach a three part lesson with time for evaluation and levelling of each student in a class of possibly 24.* (First year female; Project 1 ejournal)

*I'm not always allowed to follow things up. With like pastoral care ... kids will come to you a lot with their emotional issues and things that have gone on at home and... you're not able to deal with it yourself... You have to just pass it on to somebody else.... I find that frustrating to be honest... If you want to support a child and you're not able to then you feel more helpless and you feel... ground down by the processes...* (Third year female; Project 4 focus group)

#### *Interplay between relatedness, competence and autonomy*

It is clear from our analyses that some specific factors which ECTs indicated had a positive or negative impact on their well-being were related to more than one of the three components of SDT. This can be seen in some of the quotations presented above, such as the connection between relatedness and autonomy in the third year male teacher's account of how his Head of Department's flexible approach to using schemes of work helps keep departmental colleagues 'happy and together', while the following statement about factors negatively impacting the well-being of a different ECT can be seen to connect to both competence and relatedness:

*I was observed by my head of department [HoD]... The lesson... had elements that could have been better. My HoD then used this as the basis for understanding how all my lessons must be, without even asking me for my opinion re. her conclusions. Quite frustrating. One not so amazing lesson and that's how they all are? Poor management in my opinion...* (First year male; Project 3 interview)

#### *Other factors influencing well-being*

Table 3 provides a quantitative overview of our coding of factors found to impact ECTs' well-being which we considered were not easily explained by the three basic psychological needs identified in SDT. Amongst these, the consideration referred to most commonly by ECTs was the perceived presence or absence of appropriate *support* for their induction into the school and the profession, for their continuing professional development (CPD) and/or for their well-being itself. As the following quotation suggests, this consideration is not entirely unconnected to relatedness in SDT theory, since such support tends to be provided, facilitated or withheld by school leaders, colleagues or mentors:

*We could always go to him for the emotional support... Yeah it was very good to have a mentor; you could go and see him about everything and anything if you were stuck. At the beginning of your teaching career it can be very difficult and stressful, and it can be quite hard so they do support you and provide you with help, I think the benefits are there.* (Third year male; Project 3 interview)

However, our data suggest that, for many teachers, their appreciation of the provision of such support or their unhappiness when it is lacking go beyond valuing the presence or grieving the absence of relatedness or connectedness to others. On the one hand, they appear to value in its own right support which enables them to overcome or compensate for some of the issues and difficulties that they face, as the following quotation from one ECT illustrates:

*The ability to speak openly and frankly in one to one sessions with [mentor] has been most valued ...I have enjoyed being able to voice my opinion and being listened to, for once.* (Second year female; Project 4 mid-year survey)

On the other hand, ECTs' appreciation or unhappiness about the presence or absence of support appears to relate in at least some cases to an assumption that they have an *entitlement* to effective support for their induction, CPD and well-being, and that their employing school has or should have a duty of care to them

as newcomers to the profession. This point is demonstrated most powerfully through the words of one ECT who felt that his school had failed him in this regard:

*Far too often teachers are forced to deal with issues that are then left hanging and the teacher gets no feedback or sense of closure. This prevents them from moving on psychologically... [For example] I had a nasty letter of complaint from a parent. Totally groundless based on her daughter lying through her teeth... Some spiteful and nasty things were said by Mum. If anything is likely to cause me to leave teaching it is the way in which incidents like that are handled... There is no sense of the importance of the teacher's feelings... Schools are way behind the NHS [National Health Service] in the 'our staff aren't here to be abused' agenda. (Second year male; Project 1 ejournal)*

The above quotation is also illustrative of other data (e.g. the mentor described in the 'Relatedness' subsection above as being '*too busy to deal with me*', the head of department accused in the 'Interplay' subsection of '*poor management*', and a mentor described by another ECT as a '*complete waste of space*' – First year female; Project 1 interview) which suggest that ECTs' well-being is sometimes influenced not only by their perceptions of their own competence but also by their perceptions of the competence of others, notably line managers or various colleagues tasked with supporting them.

**Table 3: Influences on ECTs' well-being not accounted for by competence, relatedness or autonomy**

	Specific factors	Number of participants	Number of coded segments
Factors promoting well-being	Support for professional learning, development and / or well-being	24	44
	Individual dispositions including resilience	5	11
	Enjoyment of specific subject taught	5	7
	New challenge	6	6
	School environment and culture	3	5
Factors impeding well-being	Workload / lack of work-life balance	14	32
	Lack of support for professional learning, development and/or well-being	10	17
	Teacher salary and financial incentives	8	12
	Perceived injustices	7	11
	School environment and culture	2	4
	Health issues	2	2

Our analyses suggest that individual teachers' well-being was also part-shaped by their psychological make-up and dispositions, including assertiveness, optimism and resilience. Some ECTs talked about becoming more resilient or '*accepting of situations*', such as the fact that '*some classes are going to be difficult*' (Second year female; Project 2 interview). One ECT who had experienced a very difficult first year felt that her prior experiences and assertiveness helped her to get through it where others may have been less able to have done so:

*A lot of people, I think, would've fallen by the wayside. I think it's quite sad. I know somebody who's an NQT who's struggled a bit and there's just been no help but because I'm more sort of a bolshie forthright person, I've just gone up and said "well hang on a minute, this is happening and it shouldn't be." (First year female; Project 1 interview)*

Other factors positively impacting some ECTs' well-being included opportunities to take on new challenges, their perceptions of the nature of the school environment and the strategic direction being taken by the school's senior leadership team, and (as the following quotation illustrates) their deep enjoyment of teaching 'their subject':

*I'm turning into one of my geography teachers at school... like we're doing earthquakes and volcanoes and I find it really interesting now and I can see the kids are going "Why is she getting so excited about this?" and I'm like "But it's really interesting because it's shaped the earth," and I love it now. I really enjoy it. (First year female; Project 2 interview)*

Our analyses suggest that, outside of the three basic psychological needs of SDT, the single most prominent individual factor *inhibiting* ECTs' well-being is the perception of having an unmanageable workload or (often as a consequence) a poor work-life balance, which we consider qualitatively different from the perception of being unable to effectively manage a busy but potentially manageable workload (which relates to perceived competence):

*[W]hat affect[s] my well-being... is just being overworked... It got to Christmas and I was absolutely exhausted and... Again at Easter I was exhausted... I work six, six and a half days out of the seven... {So how does that make you feel about being a teacher?} ...frustrated that sometimes it's just expected that you're going to do that. (Third year female; Project 4 focus group)*

Amongst the many factors contributing to what ECTs perceived to be unmanageable workloads and poor work-life balance, several bemoaned having to deal with excessive bureaucracy, 'paperwork' or frequent policy changes, and others – including the ECT quoted below – reported that preparing for Ofsted inspections accounted for considerable amounts of time and emotional energy:

*We were Ofsteded this year and I found that stressful... it wasn't a positive experience really... me and my head of department, worked like it must have been like a hundred hour week sort of thing. I hardly slept, I hardly ate. It was awful, it was horrendous. (Third year female; Project 2 interview)*

Other factors impeding the well-being of some ECTs included the perception that teacher salaries do not reflect the nature of the work undertaken, the perceived unfairness of disparities in financial incentives to enter the profession (relating to inducements to prospective teachers of shortage subjects), and being the subject of perceived injustices such as unfair processes for promotion to more senior posts within the school. Each consideration is illustrated below:

*{How do you feel now about your decision to become a teacher?} I still think it was a bad decision. {Why is that?} I just think it's an awful lot of work and an awful lot of responsibility and for very little reward. You don't get paid half as much as what you should get paid. (First year female; Project 1 interview)*

*I really... minded that at the end of our NQT year suddenly there were three other NQTs [of 'shortage subjects'] who suddenly were given this £5,000 or something and we weren't... and I'm thinking "But we've worked... just as hard and... suddenly you're getting this extra money"... it makes you feel very bitter. (Second year female; Project 2 interview)*

*{Is there anything you are unhappy about?} Basically not progressing as I would have liked to have progressed. I found that very frustrating when... they advertised for head of department and then they decided not to employ a head of department. That has frustrated me and particularly now because they have appointed my colleague to head of department and she never even applied for it... I kind of think it a bit like it is her turn rather than it's looking at skills and qualifications within the team. (Second year female; Project 1 interview)*

Some ECTs also felt a sense of injustice about being part of school environments and cultures in which teachers in general and relative newcomers to the profession in particular feel 'powerless' or

*don't feel like [they have] got a voice that is really listened to or is valid... it doesn't matter what you think...* (Second year female; Project 4 focus group)

## **Discussion**

In this final section of the article, we discuss how our analyses support, qualify and extend findings of earlier studies, and we identify a number of implications and recommendations for policy and practice. First, however, we acknowledge a number of limitations of our work.

### *Limitations of the research*

Some of the limitations of the present study are common to those employing secondary analysis on the one hand (Hammersley, 1997) and relying on participants' perceptions and accounts of their experiences on the other (Dingwall, 1997). We recognise in particular that: (a) since in most cases participants were not asked directly about the factors influencing their well-being, some may not have mentioned relevant considerations of which they were consciously aware; while (b) participants may not have been consciously aware of some of the factors influencing their well-being; and (c) for reasons relating to social desirability bias (Fisher, 1993), some ECTs may have been economical with their truths in providing accounts of their experiences and perceptions.

We acknowledge, too, that the trustworthiness of our findings relies on the accuracy of our own inferences from participants' accounts, regarding the influences on their well-being. Related to this point, and despite the high level of inter-researcher reliability we have reported between ourselves, we accept that to some extent it is somewhat subjective and arbitrary whether certain considerations influencing ECTs' well-being are considered to lie within or outwith the three psychological needs posited in the SDT model. Hence, for example, other researchers (and perhaps Ryan and Deci in particular) might argue that some factors that we consider to lie outside the central premises of SDT can be accommodated *within* this theory of well-being.

We also recognise that the participants whose data we re-analysed comprised only a small proportion of all early career secondary teachers in England between 2005 and 2013, and that our sample included an over-representation of female teachers and of ECTs who had access to a non-school-based or 'external' mentor. In short, we cannot claim to provide an exhaustive or representative account of the factors supporting and inhibiting the well-being of ECTs in England or estimate the extent to which our findings may be transferable to other education systems. Nor, given the size and composition of our sample, are we able to state with any degree of certainty to what extent the influences on well-being that we have identified are equally applicable to or vary between teachers in their first, second or third years of teaching on the one hand, and female and male teachers on the other. Our analyses suggest that the impact of any given factor on ECTs' well-being may be more pronounced in the first year of teaching: this is supported by the higher relative number of illustrative quotations from first year teachers. Our data may also provide some evidence of variation by gender. Notably, as the illustrative quotations provided in our Findings section suggest, female ECTs in our study tend to be somewhat more expressive than males in providing indications of the impact of their experiences as teachers on their well-being. However, it is not clear whether specific factors tend to have a greater impact on the well-being of female than on male ECTs, or whether female ECTs are simply more likely to acknowledge and talk about this in general or to researchers (or the specific researchers on the selected studies) in particular. Some of these questions may be worthy of exploration through further research.

Despite its limitations, the present study provides powerful insights into factors which enhanced and inhibited the well-being of a not insignificant number of early career secondary school teachers in England during the second half of the first decade and early years of the second decade of the 21<sup>st</sup> Century – factors which may potentially impact the well-being of early career (and other) teachers in the same and different contexts today and in the future.

### *Extending the evidence base on SDT, BPNT and their relationship to well-being*

This study provides empirical support for SDT insofar as it suggests that relatedness, competence and (to a lesser extent) autonomy had a major impact on the well-being of ECTs, and by providing further evidence

of the inter-connectedness of these three psychological needs (Ryan & Deci, 2000, 2001). Our research also qualifies and extends SDT in a number of ways. Firstly, we show that in addition to competence, relatedness and autonomy, ECTs' well-being was also shaped by a wider range of both *environmental* or contextual factors (e.g. support for CPD, unmanageable workload and work-life balance) and *individual dispositions* or personal resources (e.g. resilience). We are conscious that while not directly related to competence, relatedness and autonomy, some influences on ECTs' well-being which we have suggested lie outside of SDT's three basic psychological needs, notably teachers' 'enjoyment' or 'love' of the subject they teach, may be explained by other features of SDT, such as its emphasis on the value of intrinsic motivation. Yet other apparent influences on ECTs' well-being, such as the detrimental impact of perceived low salaries relative to workload or responsibility, or disparities in the financial incentives different ECTs received to enter the profession, are less able to be explained by any aspect of SDT.

All this suggests either that Basic Psychological Needs Theory cannot account for all influences on ECTs' well-being or that SDT does not provide an exhaustive account of humans' basic psychological needs. While they do not all purport to be theories of well-being, other BPNTs might thus be examined to establish the extent to which they may provide more comprehensive coverage of the factors promoting and impeding ECTs' (and potentially others') well-being. For instance, Glasser's (1998) typology of *five* basic needs – for security, belonging, success, freedoms and fun – appears, on the face of it, to potentially explain a wider range of considerations which support or inhibit well-being than SDT does. For example, the detrimental impact on ECTs' well-being of a poor work-life balance could be explained by Glasser's model in terms of ECTs having insufficient opportunities for fun. However, some of our findings do not appear to be explainable by either SDT *or* Glasser's model of basic needs, notably the negative impact on some ECTs' well-being of perceived unfair treatment (e.g. where ECTs working no harder than they do receive greater financial incentives or rewards because they happen to teach different subjects, or where they feel they have no voice or influence within their schools *because* they are ECTs). We thus suggest that, to the extent that BPNT is correct in its assumption that influences on individuals' well-being are largely or wholly a function of their relations with need satisfaction, specific basic psychological needs theories ought to incorporate the need for fair or just treatment.

A second way in which the present study contributes to the literature on SDT is by questioning whether the theory (and the name given to the theory) may overestimate the salience of 'self-determination' as a contributory factor to individuals' well-being. In this particular context, where autonomy appears to be limited, the well-being of many ECTs appears to be consistent with a large degree of what might be termed 'other-determining' aspects of their working lives. Alternatively, SDT may be flawed not in the emphasis it places on autonomy or self-determination in shaping individuals' well-being, but in its assumption that individuals need to be consciously or meta-cognitively aware that they possess or lack autonomy in order for this to impact their well-being. We discuss this latter question in the following sub-section of this article.

A third way in which the present study extends earlier work on SDT is by showing that there is interconnectedness not only between competence, relatedness and autonomy (Ryan & Deci, 2000, 2001) but also between these three elements of SDT and additional influences on ECTs' well-being. For example, the extent to which factors such as poor relationships with students and a lack of support from colleagues impact individual teachers' well-being will be influenced by individual dispositions and traits such as resilience and assertiveness, which in turn are part-shaped by ECTs' prior experiences and interaction with cultural milieu. In addition, it might reasonably be argued that ECTs' experience of unmanageable workloads is part-shaped by others' (notably school leaders') failure to provide what Ryan and Deci (2000) term autonomy-supportive environments, as well as by other considerations such as staffing and resource constraints.

A fourth and final way in which our analyses extend the literature on SDT is through showing that an individual's well-being may be affected not only by their perceptions of their own competence but also by their perceptions of the competence of their line managers and other colleagues who are tasked to support them.

With respect to the broader well-being literature, our research supports previous findings that positive and negative influences on well-being are relatively independent and only moderately inversely correlated (Albuquerque *et al.*, 2012; Headey *et al.*, 1984). That is, while some of the factors we found to

positively impact ECTs' well-being (notably regarding relatedness, competence, autonomy and support for CPD) are the reverse of factors found to inhibit well-being, other factors which positively impact ECTs' well-being (and most of those judged to be outside of the three basic psychological needs – e.g. individual dispositions, new challenges) are distinct from some of the factors found to negatively impact well-being (e.g. poor work-life balance, unsatisfactory financial rewards). This is significant because it emphasises that, by themselves, efforts to reduce the incidence of factors which negatively impact well-being will have limited success, as will focussing solely on the promotion of factors which enhance well-being.

#### *Extending the evidence base on teacher autonomy and performativity*

One major discussion point arising from the present study concerns the relative significance of autonomy in impacting ECTs' well-being. In a policy context in which teachers in general and ECTs in particular are subject to substantial external control, and a research context in which previous studies (e.g. Goodson, 2003; Day & Gu, 2007) have highlighted threats of cultures aligned with the principles of GERM and performativity to teacher autonomy and agency, SDT – a theory of motivation and well-being which foregrounds the importance of volitional or self-determined behaviour (Ryan, 2009) – might have predicted that a lack of autonomy would feature more prominently in ECTs' accounts as an impediment to their well-being. There are a number of possible reasons why autonomy appears to be less influential than relatedness and competence in shaping ECTs' well-being in general, and why a relatively low number of ECTs highlighted a lack of autonomy as having a detrimental impact on their well-being in particular.

Firstly, as we suggested earlier, it is possible that some ECTs may not actually possess a strong innate psychological need for autonomy *in their work*. A second explanation is that, because they have never enjoyed a great deal of autonomy in their work, some ECTs do not grieve its absence as longer-serving teachers might – which is not to say that more would not value it if they were to experience it, as some ECTs clearly did. A third possible explanation is that, while they may bemoan a lack of autonomy on a day to day basis, ECTs are aware that they are ultimately able to make the choice to leave the teaching profession should they so wish – that, in effect, they hold an *autonomy trump card*.

A fourth possible explanation for the apparent relative lack of concern for autonomy amongst ECTs, which we touched on earlier, is that Ryan and Deci may be right in arguing that autonomy is an important contributory factor to an individual's well-being, but wrong in assuming that individuals need to be consciously or meta-cognitively aware that they possess or lack such autonomy. That is, the proponents of SDT clearly state that individuals need to experience '*feelings of autonomy*' (Ryan, 2009, p. 1) or '*the feeling of volition*' (Ryan & Deci, 2000, p. 74), where volition refers to conscious choice. Yet it may be possible that individuals can experience autonomy or its absence, and that this may enhance or inhibit their well-being, without them being consciously aware that they possess or lack autonomy. Related to this, while relatively few ECTs indicated that autonomy or its absence directly influenced their well-being, this may nonetheless have influenced some ECTs' experience (or lack) of relatedness, competence, and other factors which they more explicitly associate with their well-being. For example, the extent to which others engaged in autonomy-supportive (as opposed to controlling and autonomy-restrictive) behaviour towards the ECT may have been one of the factors influencing ECTs' experience (or otherwise) of relatedness, whether they were consciously aware of this or not.

As a fifth and final possible explanation for the apparent relative lack of influence of autonomy on ECTs' well-being, we should acknowledge the possibility that the detrimental impact of the principles and processes of GERM and performativity on (early career) teachers' autonomy and, in turn, on their well-being may have been overstated. One possible explanation for this hypothesis may lie in organismic integration theory, discussed earlier. That is, external control over curriculum content and pedagogy (for example, through subtle forms of social control such as inspection bodies' expectations that teachers will plan and implement 'three-part lessons') may not have a detrimental impact on ECTs' well-being to the extent that they 'buy into' or 'internalise' the rationale for such prescription – and/or 'buy in' to the need to prepare and perform for inspection. It is also possible that any such internalisation by ECTs of the rationale for prescription may have been facilitated by a lack of criticality on their part, which may in turn be associated with the reduced influence of the critical tradition of the university in teacher education in England over the last 25 years or so (Furlong, 2013). Unfortunately, our data do not enable us to gauge the

credibility of these alternative hypotheses: we consider their further investigation to be a worthy goal of future research.

Whilst our analyses provide little direct evidence of the impact of GERM and performativity on ECTs' well-being via the concept of autonomy, they nonetheless do reveal powerful evidence of the impact of some of the tools of performativity on the well-being of some ECTs. On the one hand, we have seen that where ECTs are judged (e.g. by Ofsted) to be 'performing' effectively, this can have a positive impact on their well-being via the concept of competence. On the other hand, our analyses revealed considerably more examples of the negative emotional impact of subjecting ECTs to intense scrutiny via frequent lesson observations, and of the detrimental impact on some ECTs' well-being of long hours spent preparing for 'inspection'. It seems clear that the tools of performativity can promote but more often impede ECTs' well-being via a number of mediating factors including restricting or detrimentally impacting their feelings of competence or self-efficacy, the quality of their relationships with others, and their workload and work-life balance.

### *Conclusions and Implications*

This article reports a secondary analysis of the well-being of early career secondary school teachers in England, which extends the evidence bases relating to early career teachers' working lives, teacher well-being, self-determination theory and performativity. Notwithstanding the remaining lack of clarity regarding the status of autonomy, our study suggests that satisfaction of the 'three innate psychological needs' of self-determination theory (Ryan & Deci, 2000) may be a necessary though not sufficient condition for optimising the well-being of ECTs, which is dependent upon the interaction of a greater number of individual, relational and micro-, meso- and macro-environmental factors. Whilst earlier research has identified the importance of many such factors (e.g. work-based relationships, self-efficacy, resilience, school and wider culture) for teachers in general and ECTs in particular, no previous studies have examined the relative significance of these and other factors in relation to ECTs' well-being and SDTs' three basic psychological needs, as we do in this article.

Our findings, in particular some of the emotive testimonies of ECTs reflecting on their experiences of being a teacher, support those of earlier studies (e.g. Day, 2008; Day & Kington, 2008; Kidger *et al.*, 2009; McCallum & Price, 2010) in highlighting that, for a variety of reasons, teachers' well-being matters. In the light of this, and in the best interests of the teachers, their students and schools, and the wider education system, we urge policymakers, school leaders and others to uphold their duty of care to newly and recently qualified teachers by doing their utmost to create conditions for the optimisation of these teachers' well-being. The ways in which they may do so are many and various, and different stakeholders will be able to affect different influences on well-being to different degrees. In Table 4 we offer a checklist of considerations, informed by our own research findings and those of others, for the potential use of those concerned to enhance the well-being of ECTs. We conclude by drawing particular attention to three of these considerations, which our own analyses suggest are especially important.

Firstly, we have seen that it is vital for ECTs to feel connected to other people (notably pupils/students and fellow teachers) and to feel effective and successful in their roles. In order to try to ensure that they achieve this, it is important that ECTs are provided with a range of opportunities for professional learning and development with the aim of enhancing their effectiveness as teachers in general and their ability to cultivate and maintain positive relationships with students and colleagues in particular. Related to this, and more generally, school leaders might seek to develop their schools as professional learning communities, in which expansive learning cultures (Fuller & Unwin, 2003) based around collegiality and trust are associated with enhanced effectiveness and well-being (Hargreaves, 2007). Secondly, it is essential that school leaders ensure ECTs' workloads are manageable, and that they are provided with opportunities to improve their skills of time and workload management, in order that they might achieve a satisfactory work-life balance. Thirdly, our analyses suggest that, for some ECTs at least, it is important that they feel they are being treated justly and that they have a voice within their schools. In order to help ensure that this is the case – and to support the promotion of ECTs' well-being more generally – we recommend that school senior leadership teams include a member of staff with overall

responsibility for teacher well-being, and that all early career teachers are allocated a mentor or another colleague whose remit includes a specific concern for the promotion of their well-being.

**Table 4: Checklist for supporting early career teachers' well-being**

Potential support for Well-being		✓ or X
1.	Do all ECTs have one or more colleagues who are tasked with overseeing and supporting their well-being? E.g. do they have a mentor, with whom they may speak openly and in confidence about matters which may concern them?	
2.	Are ECTs effectively supported to develop and maintain positive relationships with students, colleagues and others (e.g. parents)?	
3.	Are ECTs effectively supported to develop their feelings of competence or self-efficacy? E.g. do they receive appropriate recognition for their work?	
4.	Are ECTs provided with opportunities for decision-making and autonomous action?	
5.	Do ECTs have opportunities to teach the subjects and engage in other school-based activities that they most enjoy?	
6.	Are ECTs provided with manageable workloads, and are genuine efforts made to reduce the amount of bureaucracy and administration in which they must engage?	
7.	Are ECTs provided with professional learning or CPD opportunities to help them develop their time and workload management?	
8.	Are ECTs provided with professional development or CPD opportunities to help them develop their resilience?	
9.	Do ECTs have opportunities to undertake CPD relating to their individual learning and development needs?	
10.	Are ECTs provided with opportunities for new challenges?	
11.	Are genuine efforts made to promote trusting and collegial school environments in which ECTs feel psychologically safe?	
12.	Are efforts made to keep the amount of formal monitoring and assessment (e.g. compulsory lesson observations) to which ECTs are subject to a necessary minimum?	
13.	Are ECTs treated fairly and sensitively, and are their voices heard and taken seriously?	
14.	Are ECTs appropriately and fairly rewarded (financially and otherwise) for the work they do and the level of responsibility they hold?	
15.	Are ECTs provided with opportunities and support for career progression?	
16.	Are those colleagues tasked to support ECTs appropriately trained and accountable for this aspect of their role?	

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<sup>1</sup> At the time of writing, and according to the bibliographic database Google Scholar, the article 'Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development and Well-Being' (Ryan & Deci, 2000), published in the *American Psychologist*, had accumulated over 17,500 citations.

<sup>2</sup> In this context, induction refers to a formal programme of support, typically lasting for one school year, which state schools in England are required to provide for newly qualified teachers. It includes a reduced timetable and the allocation of an "induction tutor, to provide day-to-day monitoring and support... coordination of assessment... and effective coaching and mentoring" (Department for Education, 2015, p.16).

<sup>3</sup> Participants in the third programme, the *Science Additional Specialism Programme*, were predominantly more experienced as opposed to early career teachers.

<sup>4</sup> In some cases the factor positively or negatively impacting a teacher's well-being was judged to relate to more than one of the eight categories, so was double-coded.

<sup>5</sup> We use the term 'significant other' (Sullivan, 1953) to refer to those people whom individuals perceive to have importance and influence in relation to their self-concept and/or well-being.

<sup>6</sup> Ofsted (The Office for Standards in Education, Children's Services and Skills) is the non-ministerial department of the UK government which inspects and regulates services that care for children and young people, and services providing education and skills for learners of all ages in England, most notably schools.