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Kevin Proudfoot & Pete Boyd

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THE INSTRUMENTAL MOTIVATION OF TEACHERS: IMPLICATIONS OF HIGH-STAKES ACCOUNTABILITY FOR PROFESSIONAL LEARNING

by KEVIN PROUDFOOT ⓘ, *School of Education, University of Glasgow, Glasgow, UK* and PETE BOYD ⓘ, *Institute of Education, University of Cumbria, Carlisle, UK*

ABSTRACT: *This article considers the motivations of teachers to pursue ongoing professional learning. During recent decades, the international policy context has been characterised by high-stakes accountability, but the implications of this agenda for teachers' motivations toward professional learning remains under-explored. In this mixed methods study, combining a large teacher survey and in-depth teacher interviews, a new and significant concept of 'instrumental motivation' is generated to capture how high-stakes performance management policies damage the motivation of teachers to learn professionally. This innovative approach, employing ordinal factor analysis and inductive/deductive hybrid thematic analysis inclusive of self-determination theory, reveals how the 'instrumental motivation' of teachers should be constrained and argues for the adoption of alternative motivational strategies to support effective professional learning in schools.*

Keywords: professional learning, professional development, teacher learning, accountability, teacher motivation

1. THE HIGH-STAKES MOTIVATION OF TEACHERS' PROFESSIONAL LEARNING

Education systems internationally have experienced an extended period of high-stakes accountability (Humes, 2022; Wilkins *et al.,* 2019, 2021), characterised by disproportionate levels of scrutiny in the form of national performance systems which incorporate punitive use of inspection and league tables, accompanied by associated regional/localised performative measures, including specific features such as intensive appraisal, lesson observation, work scrutiny and data tracking. An egregious example of this trend is England, a context described by Hall and Gunter (2016, p. 22) as a 'laboratory' in this regard, where, as Beck (2008, p. 133) notes, there has been 'a systematic effort … to marginalise competing models of professional organisation'. In England, this approach of high-stakes accountability has been politically bi-partisan in nature and continues to the present moment (Proudfoot and Boyd, 2022).

Crucially, this agenda of high-stakes accountability can be understood as 'a motivational approach' (Ryan and Weinstein, 2009, p. 225), due to the salience of strategies such as reward and punishment, or esteem and shame, intended to elicit certain behaviours from teachers. Thus, when endeavours are made to motivate teachers to learn professionally, the impact of high-stakes accountability must be considered. Such an environment shapes motivational relationships significantly, including the types of motivation at play and the intensity with which these are employed. Some have concluded that impetuses for 'improvement' such as reward and punishment are largely counter-productive (e.g., Lundström, 2012). Others have presented a more mixed picture, suggesting this depends on the nature of such incentives (they may be not exclusively monetary, for example), or else that extrinsic impetuses might not work in contradiction to other more intrinsic motivations, if orientated towards empowerment, and characterised by fairness and transparency (e.g., Müller *et al.*, 2009; Runhaar, 2017).

In common with a majority of SDT-informed studies we consider motivation at the level of conscious, perceived motives and that 'to be motivated means to be moved to do something' (Ryan and Deci, 2000, p. 54). It can be differentiated from morale, as this pertains to a state of wellbeing, rather than an impetus for action. Further, it is concerned with not simply the 'level of motivation (i.e., how much motivation), but also the orientation of that motivation (i.e., what type of motivation)' (Ryan and Deci, 2000, p. 54). Self-Determination Theory SDT) provides a well-established theoretical framework for the study of teacher motivations to learn professionally in the context of high-stakes accountability (Carr 2015; Ryan and Deci 2000, 2020). Figure 1
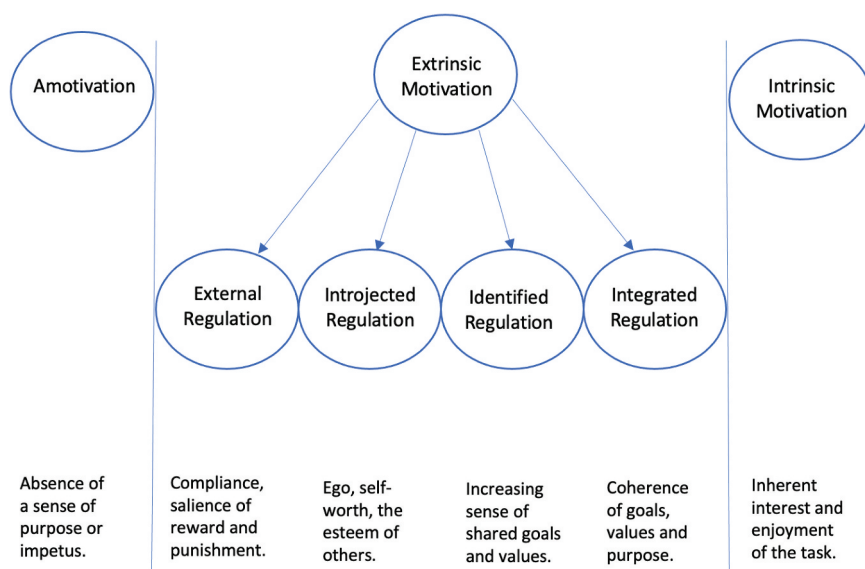

Figure 1. The self-determination theory framework (adapted from Ryan and Deci, 2000, 2020)

presents the SDT typology of six constructs of motivation along a continuum from more controlled to more autonomous (Ryan and Deci, 2000, 2020). The absence of purpose or impetus is defined as amotivation; reward and punishment are defined as external regulation; the influence of ego, self-worth and seeking the esteem of others is defined as introjection; motivation through increasingly shared values is defined as identification; a more fully internalised form of identification is defined as integration; and inherent pleasure and satisfaction is defined as intrinsic motivation. Previous work has created debate around where 'identification' ends and 'integration' begins and some theorists conflate these two categories (Gagné *et al.*, 2015). Across this typology, SDT proposes that each individual is seeking to balance three basic psychological needs which influence the internalisation of motivation: autonomy (the perceived origin of one's own behaviour); competence (feeling effective within the social environment); and relatedness (a sense of belonging through shared values and goals) (Ryan and Deci, 2000, 2020).

Previous studies framed by the study of motivation have revealed the damaging impact of controlling behaviours by managers impacting upon teachers' confidence and creativity (Eyal and Roth, 2011; Fernet *et al.*, 2012; Niemiec and Ryan, 2009; Ryan and Brown, 2005). Similar work has suggested negative pressure or motivational contagion from managers to teachers to students (Assor *et al.*, 2005). The impact on students has also included narrowing of the curriculum and a lack of in-depth learning (Ryan and LaGuardia, 1999; Sheldon and Biddle, 1998). In terms of existing SDT-related studies focused specifically on professional learning, Gorozidis and Papaioannou (2014) found 'if teachers are autonomously motivated towards training, they will be more determined to participate' (p. 9) in professional learning. However, they acknowledge their work occurred in an 'educational system with low or no accountability for teaching' (p.10); thus, it does not consider motivation and professional learning within the high-stakes accountability environment, which the present study identifies as a crucial factor. Within the high-stakes accountability context of England, Hobson and Maxwell (2017) have applied self-determination theory to the study of the well-being of early career secondary school teachers, concluding both that performativity has a major impact on the three basic psychological needs posited by SDT (autonomy, competence, relatedness) and hence the motivation of beginning professionals, but also that there are potential factors at play which extend beyond the SDT framework. On which note, it should also be remembered that linkages between teacher professional learning and motivation are not restricted to SDT. Kaplan (2013, p. 61) argues for 'dynamic' theorisation of teacher motivation due to its richly multi-faceted nature and the range of potential impetuses at play. Indeed, Richter *et al.* (2019) have shown 'teachers exhibit not just one motivational orientation to attend professional

learning activities, but several different ones at the same time' (p. 8). This view has been echoed by others arguing for a flexible and inclusive approach to the theorisation of teachers' motivations to learn professionally (Appova and Arbaugh, 2018; Garner and Kaplan, 2019; Müller *et al*., 2009). Thus, an integrative and open approach to the theorisation of motivation to learn professionally is important, hence the mixed-methods approach outlined below.

Yet definitions of professional learning vary. For example, Jones (2021) observes 'there are many ways to approach how professional learning is conceptualised [and] ... differing perspectives on professional learning and development' (pp.197–198). Boylan *et al*. (2018, p. 121) also note authors variously employ the expressions 'professional learning' and 'professional development' ... 'using different, sometimes implicit, definitions of the terms'. Others argue these terms are frequently employed interchangeably and hence 'attempts to distinguish clearly between professional development and professional learning are ... both unnecessary and unfeasible' (McMillan *et al*., 2016, p. 152), while others observe 'activities ... denoted as "professional development" vary widely in design' (Noonan, 2022, p. 4). Indeed, Coldwell (2017, p. 189) notes that 'professional development' can encompass a broad range of 'formal and informal support and activities that are designed to help teachers develop professionals. This includes taught courses and in-school training, as well activities such as coaching, mentoring, self-study and action research'. At the same time, it is acknowledged that 'under the umbrella of "professional development" there are many activities that do not support, promote or motivate ... professional learning' (Appova and Arbaugh, 2018, p. 18). Given these intricacies, it is important to acknowledge that 'aspects of teacher motivation ... may be interpreted by different readers as falling within various legitimate and related definitions of professional learning' (Authors, 2022). Nonetheless, it is important that this paper offers its own working definition of professional learning, in this case by drawing on that offered by O'Brien and Jones (2014, p. 684) who propose a 'significant difference between the systematic career progression associated with professional development and the broader, more critically reflective and less performative approach to professional learning'. As the present study of motivation seeks to describe and encompass the effects of instrumentalism on the learning which teachers seek to pursue for its own inherent value, the term 'professional learning' as understood by O'Brien and Jones (2014) is employed. Further, the present paper shares a view to be found in the professional learning 'literature which supports the perspective that you can influence teacher learning and that teachers have at least some control over their own learning and behaviour', but simultaneously accepts that 'linear models ... used uncritically' (Jones, 2021, p. 197) cannot capture the web of complex factors affecting teachers' learning (Coldwell, 2017; Strom *et al*., 2021). Thus, motivation is presented in this article as a catalyst for professional

learning, whilst accepting that this overlaps and blurs with other catalysts or inhibitors.

In sum, this study seeks to offer insights on teachers' motivations to learn professionally within a context of high-stakes accountability, employing self-determination theory as an important theoretical framework, but drawing on approaches to data collection and analysis which extend beyond this.

2. A MIXED METHODS COMPLEMENTARY ANALYSIS

This study focuses on teachers' perspectives, generating mixed methods data from an online survey and in-depth interviews. The research design takes the form of a convergent triangulation design (Creswell and Plano Clark, 2018) where the data are considered complementary (Bazeley, 2018), illustrated by Figure 2. The approach to synthesis of the data strands is also documented at length in a separate methodological article (Proudfoot, 2022). Institutional
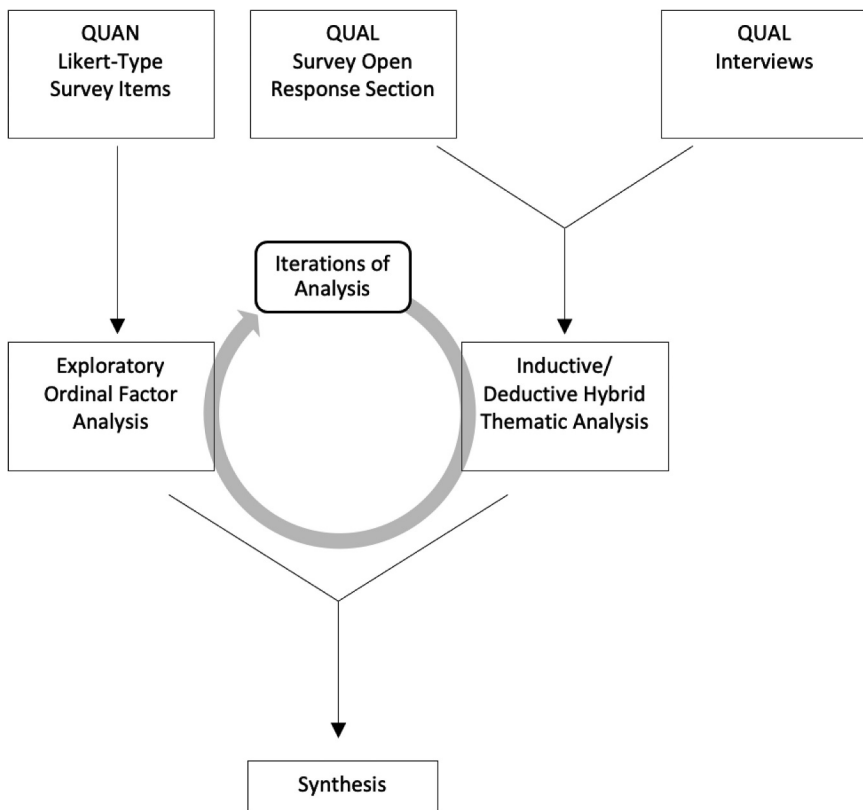

Figure 2. Overview of mixed methods study design

ethical clearance was obtained prior to data collection, ensuring proper conduct of both the survey and in-depth interviews, with specific considerations discussed in relation to each method below.

Survey Design and Distribution

The online survey used the alumni email contact database of a large university teacher education department in England to obtain a sample of teacher responses ($N = 323$), across primary and secondary school. Likert type attitude scale variables were developed to reflect the motivational constructs identified by SDT shown in Figure 1. The term 'motivation', or a root variation, was used in each survey item and other key words were derived from previous SDT survey instruments (Fernet *et al.*, 2008; Gagné *et al.*, 2015). In turn, this raises whether a survey on motivation should be domain-specific or orientate itself in respect to particular types of tasks. Fernet *et al.* (2008) proposed a survey model which asked teachers for specific motivations in relation to particular activities, such as administrative tasks or planning. However, this resulted in 'a scale is made up of 90 items' (p. 276). The negative implications of such an elaborate survey, sent unsolicited to working teachers are clear. Indeed, Fernet *et al.* (2008) acknowledge the unwieldiness of such a measurement instrument directed at a high-intensity profession such as teaching, acknowledging that 'circumstances are often not ideal' (p. 276). Others, such as Tremblay *et al.* (2009) opt for more 'global' measurement of SDT motivation within a particular context. Of particular note is that they opt for a measurement of 'six separate latent constructs (i.e., three items per factor)' (2009, p. 216), reporting a high response with positive construct and internal validity. The present study sought to find a compromise between the content specificity of Fernet *et al.* (2008) and the pragmatism of Tremblay *et al.* (2009). As such, the study comprised a three-item per factor/six latent constructs model, but with the content specificity of questions being focused on the motivational implications of professional learning. The phrase 'better teacher' was employed because of the variation in understanding of the terms 'professional development' and 'professional learning' across contexts, as already discussed in relation to the literature above. Some examples of survey prompt statements related to constructs within SDT are:

Introjection: *My motivation to be a better teacher is influenced by the esteem in which I am held by my line managers.*

External Regulation: *I am motivated to be a better teacher by my school's system of financial reward.*

Amotivation: *Performance management processes have taken away my previous motivation to be a better teacher.*

The examples above are chosen as they relate to the subsequent analysis. The survey instrument concluded with an open text response question, 'Please use the box below to add any other thoughts that you wish.', which generated a second source of data with varying free comment responses from teacher participants about their motivation to learn professionally.

The survey used a seven-choice range of responses (Fernet, 2011; Gorozidis and Papaioannou, 2014). The draft survey items were discussed with individual teachers working in a range of schools to help avoid contextual bias. A pilot survey indicated an appropriately plausible instrument: Bartlett's Test of Sphericity = 626.7 (df = 153; $p < .001$); Kaiser-Meyer-Olkin (KMO) test = 0.79481; ordinal alpha = 0.803745. Factorisation of the pilot data showed suitably reasonable fit indices (RMSEA = <.001; NNFI = 1.005; CFI = 1.003; GFI = 0.970; RMSR = 0.0658). The main survey was sent to the remainder of the alumni email database, covering 15 qualifying cohorts, thus reaching working teachers with between 1 and 15 years of service. Alumni were invited thus: 'Given the performance management of the profession, your voice as a teacher is important. This survey therefore seeks the opinions of teachers on what motivates them to learn and develop professionally'. The survey was entirely voluntary, completed anonymously and included an avenue to raise any concerns (none took this opportunity).

Rationale for Ordinal Factor Analysis

Factor analysis is useful in determining the nature and number of distinct constructs needed to account for the pattern of correlations among the teacher responses to the prompt statements in the survey. Parametric analysis is based on assumptions such as equality of variance and normal distribution (Jamieson, 2004). We thus employed an ordinal factor analysis (Lorenzo-Seva and Ferrando, 2021), more suitable to the treatment of Likert-type data (Jamieson, 2004), alongside a non-parametric equivalent for analysis of variance between groups, Kruskal-Wallis tests. We used Parallel Analysis and Unweighted Least Squares with Promin rotation, methods considered suitable for ordinal data (Lorenzo-Seva and Ferrando, 2021). The internal reliability of the scale was assessed using ordinal alpha (Gadermann *et al.*, 2012).

Interviews: Participant Selection and Analytical Approach

A smaller number of in-depth teacher interviews generated qualitative data ($N = 7$). In respect to participant selection, firstly, teachers were approached with varying years' service. Second, they were drawn from an approximately equal balance of primary and secondary age-phases. A third factor was they be participants currently working in standard state education contexts in England. Finally, the individuals

invited to interview were identified through informal networks for ethical reasons, without involving school managers (due to the high-stakes accountability focus). They did not have a managerial relationship or personal connection with the researchers. Interviews were undertaken by the first author only. Interviewees had not been approached to complete the survey. Interviews were conducted at a university setting, so teachers were comfortable discussing questions of power and performance outside of their own managerial environment.

The interviews contrasted with the online survey by using three core questions and allowing participant teachers to steer the focus of the conversation, thus supporting a complementary analysis (Bazeley, 2018). The core questions were followed by neutral prompts to set the broad focus but allowed teachers to raise issues important to them (Gill *et al*., 2008). The initial question asked participants about their broad motivational stance in relation to their professional learning as teacher and the second asked 'To what extent are your motivations to learn shaped by the school you work in?' A final question asked 'Does performance management motivate you to be a better teacher?'.

This qualitative data was analysed using a hybrid thematic approach combining inductive reasoning and open coding to generate themes in parallel with deductive reasoning through pre-established codes derived from the theoretical framework of SDT (Proudfoot, 2022; Fereday and Muir-Cochrane, 2006). This approach helped ensure the voice of the participants was valued, whilst maintaining the application of a rigorous theoretical framework. For the inductive element, the six stages outlined by Braun and Clarke (2006) were pursued: familiarisation with data; generation of initial codes relating to teacher surveillance; searching for surveillance-related themes; reviewing themes; defining themes; final analysis. This was in combination with the trustworthiness criteria described by Nowell *et al*. (2017): a documented audit trail; team debriefing and external checking; detailed description and evidencing of themes; triangulation between data sources. For the theory-led process of thematic analysis, the three-stage process recommended by Boyatzis (1998) was pursued: (1) to establish themes 'through reading and contemplation [of] the theory', (2) to check 'compatibility with the raw information' through pilot coding and (3) 'to determine the reliability of the coder' (p.36); an estimation of inter-rater reliability was attained with Cohen's Kappa = 0.874, representing a strong level of agreement (O'Connor and Joffe, 2020). For both the inductive and deductive thematisations, the main analysis was undertaken by the first author, with the second author working in the external checking/inter-rater reliability role. It is also important to note, while the sequencing of the analytical process is 'presented as a linear, step-by-step procedure' for the purposes of clarity, inductive/deductive hybrid thematic analysis is in fact 'an iterative and reflexive process' (Fereday and Muir-Cochrane, 2006, p. 83). Thus, the 'combined use of inductive and deductive approaches to the same qualitative data … [offers] greater rigour … [through] mutual reinforcement' (Proudfoot, 2022, p. 3).

3. QUANTITATIVE ANALYSIS: SURVEY RESULTS

The respondent rate was relatively low at 9.8%, which is to be anticipated with use of an alumni database (Lambert and Miller, 2014). Using the alumni database helped to ensure respondents were based in a wide range of school settings. Importantly, the database allowed direct contact to invite teachers to participate without involvement of school managers, thus providing reassurance of anonymity and confidentiality. The survey achieved $N = 323$ respondents, which after screening for anomalies resulted in $N = 319$, amply sufficient for factorisation.

Descriptive statistics (see Table 1 below) clearly indicated a higher perceived motivation in relation to those individual survey variables measuring for the identification, integration, and intrinsic constructs within SDT. Conversely, there was generally a lower perceived motivation for survey variables measuring for external regulation and introjection. However, a slightly more positive response was noted to a survey item measuring for external regulation referring to greater pay reward, suggesting the possibility this may carry some motivational traction for some teachers. Similarly, some introjection variables showed slightly more positive responses, suggesting ego and esteem may carry some motivational potency. Considerable ambiguity appeared in responses to survey items measuring for amotivation, discussed below.

The standard indicators were calculated for the viability of a factor analysis and were all positive (Ordinal Alpha = 0.792125; Bartlett's test of sphericity 1636.5 df = 153; $P = 0.000010$; Kaiser-Meyer-Olkin (KMO) test 0.79263). Parallel analysis recommended the extraction of 3 factors, based on real-data % of variance (random % of variance of 31.1/14.8; 20.0/13.5; 13.1/12.3). The subsequent factorisation, see Table 2, showed positive goodness of fit indices for a three-factor model (RMSEA = 0.038; NNFI = 0.977; CFI = 0.985; GFI = 0.985; RMSR = 0.0433).

The first factor was associated with three elements in the SDT continuum: identified, integrated and intrinsic forms of motivation. This was perhaps due to shared aspects such as the relative degrees of autonomy and internalisation and this merger between intrinsic and identified motivation has been found in a previous study (Wilkesmann and Schmid, 2014). Conversely, the second extracted factor, which forms the focus of this paper, showed a motivational cluster characterised by externality, performance and control, with an observable association between introjection and external regulation. Again, similar blurring of external regulation and introjected motivation, both characterised by external control and a sense of performance, has been found in previous studies (Fernet et al., 2008; Guay et al., 2000). The third factor, amotivation as a distinct construct, is consistent with SDT because amotivation is concerned with the absence of motivation. The factorisation also indicated there was weaker loading for the first variable measuring for amotivation. This variable was close to

TABLE 1: Initial descriptive statistics of teachers' motivational dispositions towards professional Learning

	Amotivation V1	Amotivation V2	Amotivation V3	External Regulation V1	External Regulation V2	External Regulation V3
Median	4.00	4.00	4.00	2.00	2.00	5.00
Skewness	–.109	–.141	.136	.532	1.214	–.365
Kurtosis	–.967	–.767	–1.087	–.888	.616	–1.018
Range	6	6	6	6	6	6

	Introjection V1	Introjection V2	Introjection V3	Identification V1	Identification V2	Identification V3
Median	5.00	3.00	6.00	6.00	6.00	6.00
Skewness	–.657	.135	–.946	–1.413	–1.109	–1.301
Kurtosis	–.615	–1.284	.330	2.603	1.773	2.420
Range	6	6	6	6	6	6

	Integration V1	Integration V2	Integration V3	Intrinsic Motivation V1	Intrinsic Motivation V2	Intrinsic Motivation V3
Median	6.00	6.00	6.00	6.00	6.00	6.00
Skewness	–1.641	–1.830	–.934	–1.802	–1.171	–.874
Kurtosis	4.091	5.356	1.109	4.259	1.666	1.277
Range	6	6	6	6	6	6

TABLE 2: *Ordinal factor analysis of teachers' motivational dispositions towards professional learning*

Variable	Factor 1	Factor 2	Factor 3
Intrinsic Motivation V1	0.649		
Intrinsic Motivation V2	0.717		
Intrinsic Motivation V3	0.505		
Integration V1	0.621		
Integration V2	0.714		
Integration V3	0.581		
Identification V1	0.337		
Identification V2	0.627		
Identification V3	0.568		
Introjection V1		0.552	
Introjection V2		0.564	
Introjection V3		0.579	
Extrinsic Regulation V1		0.529	
Extrinsic Regulation V2		0.304	
Extrinsic Regulation V3		0.739	
Amotivation V2			0.702
Amotivation V3			0.737

Loadings below 0.300 omitted. Amotivation V1 was excluded from analysis due to weak loading on Factor 3.

the loading threshold of 0.3 (0.262) employed in ordinal factor analysis but was eliminated because of its ambiguous loading in the interests of rigour.

Kruskal-Wallis tests, appropriate for ordinal data, were employed to identify any meaningful variation between groups. Post-hoc Dunn-Bonferroni tests were then used to identify specific statistically significant pairwise combinations, where Kruskal-Wallis tests had first identified the initial possibility of difference. Interestingly, in terms of the grouping of 'performance pay awareness', there was an absence in variation between groups in relation to the variables measuring for external regulation. 'performance pay awareness' asked participants to identify if they were aware of performance pay being in operation in their school, with the option responses being 'Yes', 'No' and 'Don't Know'. It might be anticipated that a school where performance pay was explicitly in use (i.e., where participants indicated 'Yes') would result in external regulation being perceived to be a more potent motivator. However, this was not the case, with the Kruskal-Wallis test showing no variation, which is worthy of note. Instead, an area of difference emerged with the variables measuring for amotivation, whereby teachers overtly aware of performance pay in their context appeared *more likely* to be amotivated. The post hoc test showed a statistically significant difference between those who identified as 'Yes' and 'No' (H = 31.558, $P = 0.34$) to performance pay in use in their school,

suggesting performance pay leads to more punitive and controlling management, resulting in teachers' amotivation.

To conclude, the survey analysis presents a dichotomy between more autonomous and internalised impetuses which teachers experience as motivating and more controlling, external forms of motivation which teachers experience as reducing their motivation to learn professionally. However, the analysis reveals some ambiguities in terms of the motivation to learn induced by financial reward (external regulation) and by seeking the esteem of others (introjection). Amotivation appears to sit apart, consistent with the SDT framework. No other statistically significant differences emerged in respect to the instrumental motivation of teachers according to various variables relating to school type, years' service, roles and responsibilities or gender, suggesting a commonality of perspective in terms of motivational dispositions, perhaps related to widespread and pervasive conditions of high-stakes accountability.

4. Qualitative Data Analysis

This section presents the hybrid thematic analysis of the qualitative data from the single open response prompt question in the teacher survey ($N = 68$) and from the transcripts of semi-structured in-depth teacher interviews ($N = 7$). As noted above in Figure 2, analysis took place concurrently, with these mutually complementary qualitative data strands being examined in an iterative and reflexive way before synthesising together, though weighted towards the interviews as the more substantial data source. Participants are presented as: 'Pseudonym', Years' Service, Age Phase/School Type, Role (Where Applicable), Interview/Survey. All available information on participants has been provided in the interests of transparency, however, no patterns emerged in the qualitative data on the basis of these characteristics, unless otherwise stated explicitly in the analysis itself. Likewise, space does not allow for elaboration on the different categories of school in the context of England; see Courtney (2015) for more in-depth mapping of school types).

Inductive Thematic Analysis

The inductive thematic analysis using open coding generated two themes labelled as 'sense of professionalism' and 'experiences of managerialism' as shown in Figure 3. This paper focuses on and presents the analysis of 'experiences of managerialism'. The 'sense of professionalism' theme included five elements: sense of vocation; trust; autonomy; collegiality; and professional well-being. The findings in respect to 'sense of professionalism' are discussed at length in a separate article (Proudfoot and Boyd, 2022), but are briefly summarised here. The theme of sense of professionalism included the sub-element of trust, most often expressed as a lack of trust, but, where
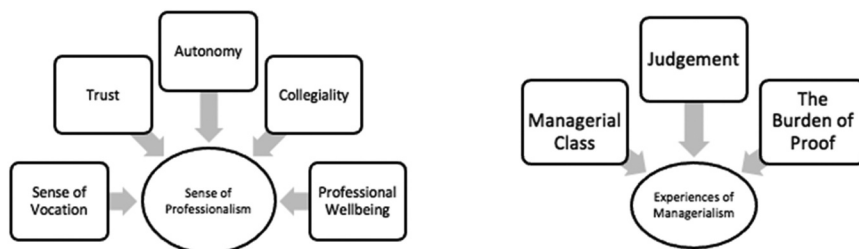
Figure 3. Inductive thematic coding of interview data

rarely present, high levels of professional trust were perceived by teachers as a motivation to learn. Relatedly, the sub-theme of autonomy concerned how the freedom to make professional choices was associated by teachers with the motivation to learn, but again was often felt by its absence. The sub-theme of vocation was considered potent impetus for professional learning, expressed as sense of mission and purpose by participants. The motivation to learn through collegiality was an element chiefly developed from the semi-structured interviews, taking the form of a culture of mutual self-improvement. Motivation through professional wellbeing contrasted with other elements of the 'sense of professionalism' as it was linked by participants to working conditions, yet it contained a powerful sense of professional status and is thus reported.

As shown in Figure 3, the theme 'experiences of managerialism' includes three elements: managerial class; judgement; and the burden of proof. These are now presented and developed with illustrative quotations, principally drawn from teacher interviews, but with examples from the survey open responses where appropriate. As they are expressive of generated themes, quotations are generally illustrative of an overall pattern across the qualitative data. Where any exceptions or outliers were in evidence, these have been clearly indicated in the body of the analysis (see the note on 'amotivation' below).

Managerial Class
The notion of a distinct and distant 'managerial class' of school leaders as a factor affecting motivation was strongly represented in both the open survey response data and the interview data, with some teachers describing a culture of diktat:

> I know that other staff members felt the same, but whenever anybody spoke up about it … they were shot down completely.
> 'Ella' − 2 years' service, local authority primary, pre-threshold, survey response.

It is interesting to note the sense in which this teacher felt silenced by a managerial culture, revealing an absence of collegiality between school managers and teachers. In

both primary and secondary contexts, more experienced teachers noted similar feelings:

> They weren't interested in offering me support, or seeing how they could possibly move me on or help in particular ways, and so then I lost interest.
>   'Susie' − 9 years' service, independent secondary academy, subject department head, interview.

Due to this notion of separation or distance, middle managers were seen as occupying an invidious position as the intermediary between two factions:

> I just think sometimes they're in a difficult position. They're stuck between a rock and a hard place … they are in a ridiculous position between senior management and your average teachers because they're getting it from both directions, generally contrasting views as well and contrasting aims.
>   'Luisa' − 4 years' service, local authority secondary, interview.

Overall, this element amounts to a sense of separation between teacher participants and their school managers, with perceived negative implications for the motivation to learn professionally.

Judgement

'Judgement' was a significant element within the theme of 'experiences of managerialism', but it may have been more appropriate to entitle it as 'misjudgement'. Unfairness in respect to target-setting appeared to have a considerable impact upon teachers' motivation to learn professionally. Teacher perspectives made clear the significant presence of these judgements:

> The expectations that are put on teachers from policies … to make sure students are meeting their target grades … the pressures for teachers to hit these targets is insane, it's phenomenal …
>   'Seth' − 3 years' service, independent secondary academy, interview.

Teachers revealed a sense of being judged against ever more unachievable targets, engendering feelings of futility and demotivation:

> One of the reasons I left [the profession] was the undue pressure and suspicious attitude of management team of my colleagues, no matter how hard we tried to impress them or hoops we jumped through.
>   'Jane' − 5 years' service, local authority primary, survey response.

This sense of 'unattainability' was associated with teachers' perception of a demotivating opacity to such judgements:

You would want to think, 'well what's he marking us on, where is he pulling these numbers from?' I don't think there was an awful lot of thought went into it ... So yeah, I think it has demotivated the staff across the board quite heavily.

'Thomas', 10 years' service, local authority primary, interview.

As well as opacity, teachers highlighted the inconsistency of the judgements made about their performance, with school managers seen as repeatedly and unfairly introducing new initiatives in response to perceived external pressures:

That knocked my motivation ... again, it's just their thing of panic stations and everything had to change ... we never ever got the chance just to simply focus on one initiative and embed it. It was this constant moving of goal posts, and that was obviously driven by Ofsted [school inspectorate in England].

'Susie' − 9 years' service, independent secondary academy, subject department head, interview.

In respect to unfair judgement, some teachers reported the demotivating influence of 'teacher surveillance' exercises designed by school managers to replicate Ofsted inspection processes, or to generate evidence for use with inspectors:

Yeah, book scrutiny; I understand scrutinising my marking for next steps ... But scrutinising that a child has not underlined their date or scrutinising that 'Tom' has coloured in his sticker on the front of his book ... That baffles me. That demotivates me.

'Grace' − 2 years' service, local authority primary, interview.

This notion of 'book scrutiny' as a form of demotivating and unfair judgement occurred across teachers based in primary and secondary schools. It links to a second form of teacher surveillance in schools: 'learning walks' or 'drop-ins' which were perceived as a form of 'no-notice' lesson observation by school managers:

What's the purpose of a drop-in? ... I mean, someone enters my classroom, a member of SLT [senior leadership team], I automatically assume they're watching and judging me ... I think if they were constant ... it would make me feel really anxious and untrusted and therefore it would demotivate me.

'Seth' − 3 years' service, secondary independent academy, interview.

This sense of managerially instigated fear resulting in a 'judgement culture' was explicitly associated with school inspection and its demotivating effects:

Currently there is the Ofsted fear and suddenly it feels like any autonomy is being taken away ... now suddenly I feel like there is almost like a panic setting in ... honestly, I find it really demotivating.

'Luisa' − 4 years' service, local authority secondary, interview.

The effect of judgemental observation on teachers' motivations also appeared to create a sense of misdirected motivation:

> Often an observation can be very thought-out by a class teacher and it can be very structured, so the observer sees what the class teacher wants them to see. For example, if they don't want them [the school manager] to look in their books, they won't do an activity in their books ...
>   'Grace' − 2 years' service, local authority primary, interview.

This perceived unfairness of the judgment process creates an incentive for teachers to present their observer with contrived classroom practice, rather than focus on authentic professional learning.

In summary, with some variation related to their differing school contexts, the inductive thematic analysis generated a sub-element of 'judgement' which shows teachers experiencing unfair, opaque and inconsistent judgement, with a consequent negative impact on the motivation to learn professionally.

The Burden of Proof

'The burden of proof' was a final significant element within the theme 'experiences of managerialism'. The burden of proof is characterised by the scrutiny of practice through bureaucratic data collection which was frequently referred to by many teachers as a 'tick box' exercise:

> I would be more motivated to be a better teacher if I wasn't ... expected to devote my entire life to school ... filling in endless data and box ticking projects.
>   'Daisy' − 3 years' service, local authority primary, survey response.

Such shared descriptions of a bureaucratic evidentiary process were pervasive and teachers saw the process as pointless:

> ... I don't like spreadsheets [laughs] ... Because I feel like all I ever do is colour in spreadsheets and put numbers in spreadsheets, and who is it for? Because it's not for the children, and I don't really think it's for me either, it's for the powers above, and what do they do with it?
>   'Grace' − 2 years' service, local authority primary, interview.

This is illustrative of teacher remarks suggesting a fine balance between purposeful evidencing of activity and a demotivating approach which merely duplicates workload or describes existing activity without improving it. Teachers express a demotivating sense that such activities are undertaken for the benefit of other adults. A notion of 'proving' rather than a motivation to learn professionally.

Overall, three elements of managerial class, judgment, and burden of proof combine to form the theme 'experiences of managerialism', which was strongly represented in the qualitative data. This inductive theme interweaves with

constructs adopted as themes from the theoretical framework of SDT, discussed below.

Deductive Thematic Analysis

Three Self-Determination Theory (SDT) motivational constructs, adopted as deductive reasoning themes, are presented here: amotivation; external regulation; and introjection. These three motivational construct themes are the most directly relevant to the focus of this paper on the instrumental motivations of teachers to learn professionally. Again, extended discussion of the other SDT components of identification, integration and intrinsic motivation can be found in a separate article (Proudfoot and Boyd, 2022).

Amotivation

The SDT motivational construct of 'amotivation' means the absence of motivation, characterised by a dearth of purpose and value. The extent to which this was because of contextual variation is striking: for example, a teacher with a reasonable degree of motivation in her current context reported a high level of amotivation in a preceding school, attributed to the instability induced by high-stakes accountability:

> ... staff absence, staff resignation, constant changes to policy, constant changes to staffing...it just got to the stage where it was: this isn't healthy, this isn't motivating.
>> 'Luisa' – 4 years' service, local authority secondary, interview.

Another teacher commented how, despite being ostensibly 'successful', they experienced a growing sense of amotivation:

> I'm an outstanding teacher as rated by OFSTED and in this current climate of teaching - I am looking to leave the profession.
> 'Gillian' – 12 years' service, secondary independent academy, survey response.

Thus, amotivation appeared to be present as a response to high-stakes accountability on the part of some participants, though to some extent contingent on localised contextual factors, rather than wholly attributable to the over-arching national policy agenda. Also, amotivation was not the preserve of 'failing' teachers, but experienced by those who might be considered 'beneficiaries' of high-stakes accountability. These teachers were reduced to a state of motivation (or rather its absence) which would clearly have highly negative implications for professional learning. However, amotivation was less present across the qualitative data than the other SDT constructs described below, perhaps unsurprising given that it possesses such powerfully negative characteristics and would thus be expressive of unusually challenging circumstances.

Introjection

A second motivational construct from SDT is 'introjection', characterised by notions of the ego, self-worth and the esteem of others. For participant teachers, the construct of 'introjection' appears to be a more internalised and potent motivator than SDT might posit. Teachers referred to the professional esteem which they hold in the eyes of school leaders and this appears to be a considerable driver for some teachers to learn professionally:

> I think it's really important because if they [school leaders] don't hold us in esteem, it's not that you're trying to do a good job for them because you're doing a good job for yourself and the children, but you want them to also be confident ... then that motivates you to do a better job ...
>
> 'Angelica' − 6 years' service, local authority primary, interview.

At the same time, a kind of collegial introjection also proves evident, with teachers measuring their sense of worth against their peers and perhaps competing with one another for esteem. This competition to learn to 'be better' professionally seems more centred on introjection than on external regulation (such as competing for performance-related pay or avoiding performativity-type punishments):

> I don't know if it's selfish, but I want to be the best. I do want to be. It's like anyone ... they want to be the best in their fields.
>
> 'Seth' − 3 years' service, secondary independent academy, interview.

However, it is worth noting one participant teacher highlighted some possible consequences of competition for status or esteem in terms of wellbeing:

> Some of my colleagues, yeah probably it makes them ill or anxious ... they can't cope with not being the one that everyone else is looking to or the one at the top of their game.
>
> 'Luisa' − 4 years of experience in secondary school, interview.

Thus, the extent to which introjection motivates professional learning and the extent to which it motivates *effectively* are arguably different questions. Indeed, Ryan and Deci (2000, 2020) do not contend that introjection fails to motivate, but rather it does not motivate as effectively as more internalised forms of motivation. Finally, the analysis also showed how for some teachers, introjection bleeds into identification:

> I think it's a lot more balanced here because there is that trust in the teachers. Yeah, I do feel there's that element of trust and there isn't that constant over-looking eye ...
>
> 'Susie' − 9 years' service, secondary independent academy, subject department head, interview.

In this illustrative example, the teacher blurs the pursuit of the esteem of school leaders, associated with introjection, with notions of trust and greater autonomy, associated with identification, as interrelated factors in the motivation to learn professionally. This quotation also suggests the possibility of localised mediation within an over-arching context of national high-stakes accountability.

External Regulation

'External regulation', which is characterised by reward and punishment, was a pervasive phenomenon within teachers' perspectives. Control and punishment could, for example, take the form of imposed workload, excessive scrutiny, or constraint on autonomy and this was articulated by many participants, but powerfully summarised by 'Charlotte':

> Extremely intrusive monitoring . . . a horrendous demotivating performance management system. The Head Teacher uses performance management more as a threat than an encouragement. I have become disillusioned with the whole process.
>
> 'Charlotte'- 3 years' service, local authority primary, survey response.

External regulation also included the strategy of performance pay. Many teachers dismissed financial reward as a key motivation for professional learning:

> Performance management is disrespectful. I want to be better because I want to be better. I don't need the financial aspect to be dangled in front of me.
>
> 'Rebecca'- 4 years' service, secondary independent academy, survey response.

However, it is worth noting that while one participant considered himself to be unmoved by punitive external regulation in the form of withheld pay progression, he simultaneously felt performance-*enhanced* pay would be motivating in principle:

> Interviewer: And you would find that motivating?
> Yeah. I think money is a great motivator.
>
> 'Thomas', 10 years' service, local authority primary, interview.

This, however, was speculative on the part of 'Thomas', as this same teacher indicated it would need to be based upon what he perceived to be the highly unlikely prospect of fair and holistic judgement. This relates back to the previously presented element of judgement and the perceived unfairness of targets based on data, a view shared by 'Roger':

> . . . it's all based on what it's being judged on. If someone said to me, 'I'm going to give you £10,000 extra because you guide others' . . . great . . . but if they turned round and said, 'I'm going to give you a £10,000 pay rise because of your results', I think that's wrong because every cohort is different.
>
> 'Roger' − 12 years' service, local authority primary, interview.

Thus, despite some signs of positive motivation for performance-*enhanced* pay (at least in principle), there was an emphasis on the demotivating effects of the *punitive* use of performance pay. Yet while pay as an incentive was recognised as a motivator by some teachers, this was only in a speculative sense and with considerable scepticism as to its practical viability. For many other participants, pay appeared to be a very limited motivating factor for professional learning.

5. SYNTHESIS AND DISCUSSION: IMPLICATIONS FOR PROFESSIONAL LEARNING

This section discusses the synthesised qualitative and quantitative data strands and their implications for professional learning. Through complementary analysis and synthesis, two key concepts emerged as significant hypernyms, namely the 'constitutive motivations' and 'instrumental motivations' of teachers to learn professionally. Aristotle makes a distinction between constitutive and instrumental actions (Trans. Ross, 1994). Constitutive are those activities performed for their own sake, whereas instrumental are those where the ends and the means are not the same. Modifying this distinction, the present study seeks to articulate a new and significant conceptualisation of teachers' motivations to learn professionally in a high-stakes context, allowing for rich interplay between existing theory and inductively generated themes. By so doing, it aligns with those who consider teacher motivation to be dynamic and multi-dimensional (Appova and Arbaugh, 2018; Garner and Kaplan, 2019; Hobson and Maxwell, 2017; Kaplan, 2013; Müller *et al*., 2009; Richter *et al*., 2019), as the notions of constitutive and instrumental motivation allows for the interaction of a range of impetuses affecting teachers' professional learning within an overarching motivational construct. In this way, the present study recognises the value of SDT as a theoretical framework for the understanding of teachers' motivations for professional learning but extends beyond this to include motivational factors which are not specific to self-determination theory, thus echoing Hobson and Maxwell's (2017) view of SDT, namely that it is a powerful theory, but not all encompassing. For example, a concise summary of the constitutive motivations of teachers to learn professionally are those motivations associated with factors such as vocation, autonomy, shared values and inherent satisfaction. Within the SDT framework (Ryan and Deci, 2000, 2020), the categories of identified, integrated and intrinsic motivation would align with some of these areas, but constitutive motivation as a concept allows for the capture of rich inductive themes beyond this, inclusive of the inductive theme of sense of professionalism already outlined above.

However, this paper focuses on the motivating power of 'instrumentalism' for teachers to learn professionally. This can be defined in opposition to constitutive motivation, with instrumental motivation being the impetus of 'something else' (for example, reward, avoidance of punishment, esteem). Through

the concept of instrumental motivation, inductive themes in the qualitative analysis can be aligned with the second factor extracted by the quantitative analysis. For example, given the instrumentalist nature of the quantitative external regulation-introjection factor, there is clear scope for alignment with the qualitative inductive theme of 'experiences of managerialism'. The notions of unfair judgement and the burden of proof within the theme of managerialism are both expressive of this same sense of negative and demotivating control. Similarly, the qualitative deductive themes can be aligned with the quantitative 'external regulation-introjection' cluster. For example, the qualitative data coded as external regulation can be linked with the lower medians for the variables measuring for external regulation in the survey, indeed amplifying these and offering richer detail as to how external regulation manifests itself in the form of punitive control. In this way, the study both draws upon and also extends beyond self-determination theory, with the hypernym of instrumental motivation enabling the capture of the SDT constructs at play, such as external regulation and introjection, but also crucial inductive aspects such as judgement and the burden of proof. Responses to instrumental motivation on the part of teacher-participants included demotivation, superficial compliance and description of existing activity, without actually improving it. Thus, instrumental motivation leads to neglect of constitutive, educationally purposeful, child-oriented professional learning in favour of adult-oriented extraneous activities. The commonality here is that these reward, punishment, and esteem-based motivations are all the motivation of 'something else', a crucial factor to bear in mind when designing and leading professional learning.

The concept of instrumental motivation seeks to provides specific new insight into the motivational impact of high-stakes accountability on professional learning. Here, the implications of instrumental motivation seems clear: either outright demotivation, or the misdirection of motivation towards behaviours not conducive to professional learning (Carr, 2015; Noonan, 2022; Ryan and Brown, 2005; Ryan and Weinstein, 2009). The present study finds minimal evidence to support the view that instrumental motivations such as reward can be configured effectively to support professional learning, thus in contrast to Müller *et al*. (2009), McMillan *et al*. (2016) and Runhaar (2017). Yet the context of high-stakes accountability may be crucial here; the more moderate, benign and proportionate configurations of incentive-based professional development articulated by Müller *et al*. (2009), McMillan *et al*. (2016) and Runhaar (2017) do not appear to be pragmatically viable in such an intensive policy environment as England. Instead, the present study confirms that contexts of high-stakes accountability are fraught with motivational conflict (Carr, 2015), where the pursuit of 'performance' obstructs the fulfilment of more meaningful motivations to learn professionally. Indeed, even where instrumental motivations appear to be perceived by some teachers as an impetus to 'improve', the authentic nature of that 'improvement' is open to question. Arguably, what

'improves' is a teacher's engagement with performativity, rather than professional learning in a more genuine sense. While it is possible that some teachers may be able to negotiate tensions within performative cultures, this study concludes that the instrumental motivation of teachers through performativity is generally likely to have pernicious influence on professional learning. Here, the debate around the complexities of defining professional development and professional learning becomes highly relevant (e.g., Proudfoot and Boyd, 2022; Boylan *et al.*, 2018; Jones, 2021; McMillan *et al.*, 2016; Noonan, 2022). If as O'Brien and Jones (2014) argue, professional learning should be defined as being inherently less performative and more critically reflective in nature, then instrumental motivation will perhaps inevitably undermine its pursuit. Likewise, following Appova and Arbaugh (2018), this study also confirms there is much under the banner of 'professional development' that does not motivate meaningful professional learning, precisely because of its instrumental nature.

In sum, taken overall, our synthesis broadly supports Ryan and Deci's (2000) basic argument of a continuum of negative-to-positive forms of motivation when applied to professional learning, with less productive forms of motivation being characterised by increasing lack of autonomy, relatedness and internalisation. At the same time, the study offers the new and significant concept of instrumental motivation to capture aspects of professional learning in a context of high-stakes accountability which extend beyond self-determination theory. This study demonstrates the difficulties and challenges associated with meaningful professional learning in such a high-stakes context. From this work, it is clear that alternative strategies for professional learning should be pursued, rejecting instrumental approaches and harnessing the motivation to be derived through an increased autonomy which acknowledges teachers' vocational commitment.

6. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

By treating the survey data as ordinal and using non-parametric analysis we can only relate our findings to the perspectives of 319 teachers, rather than extrapolate to the teaching workforce at large. We consider this a strength as the appropriate treatment of Likert-type data, but acknowledge this renounces claims to generalisation associated with parametric analyses. In addition, this is the exploratory first use of a new survey instrument and the results from it should therefore be interpreted with caution. In relation to the qualitative data, the small sample of teacher interviews constrained the range of school contexts in which participants were working. Given the number of these interviews, they must also be understood as exploratory and illustrative, rather than representative of a wider population.

There are thus opportunities for future research in a range of ways: whether the wider application and further testing of the quantitative instrument, or expansion of the qualitative component. This could include further exploration of contextual variation, by applying such approaches in a more focused way; for example, with schools within a particular type of intermediate governance, or with groups of schools deemed to be either more or less successful in inspection terms.

The present study would also not seek to minimise the complexities of either teacher motivation or professional learning. While identified as an important concept, 'instrumental motivation' should also be located within the broader context of varied and complex factors affecting professional learning (Coldwell, 2017; Strom *et al*., 2021). Likewise, in the broader domain of the motivation of teachers, previous SDT-informed studies have depicted similar high-stakes conditions and related them to a range of other less productive or unhealthy behaviours not specific to or broader than professional learning (Assor *et al*., 2005; Eyal and Roth, 2011; Fernet *et al*., 2012; Hobson and Maxwell, 2017; Niemiec and Ryan, 2009; Ryan and Brown, 2005; Sheldon and Biddle, 1998). Thus, while this study offers the valuable new concept of instrumental motivation, this should be positioned accordingly.

The study also hints at the possibility there may be other areas to be explored in greater depth. For instance, one participant identified the mediating role of the middle leader as a motivational factor and whilst this specific angle cannot be explored in depth here, it suggests an interesting avenue for future enquiry. Similarly, whilst this study focuses on what teacher perspectives can offer to an understanding of professional learning motivations in a high-stakes context, it may be possible to examine the perspectives of school leaders themselves on this motivational dynamic, particularly those who feel able to be agile and mediatory in response to accountability.

7. DISCLOSURE STATEMENT

8. ORCID

Kevin Proudfoot http://orcid.org/0000-0001-6497-016X
Pete Boyd http://orcid.org/0000-0002-2234-3595

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Correspondence
Kevin Proudfoot
School of Education
University of Glasgow, Glasgow G12 8QQ, UK
Email: kevin.proudfoot@glasgow.ac.uk