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Teaching as affective labour in a datafied world: a scoping review of the relationship between performance-based accountability and teachers' emotions

La enseñanza como trabajo afectivo en un mundo dataificado: una revisión de alcance de la relación entre la rendición de cuentas basada en el desempeño y las emociones de los docentes

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Abstract: Research has shown that in many contexts, the transformation of the public sector associated with new public management (NPM) reforms and performance-based accountability (PBA) has had profound implications for public sector workers' practices, identities and emotional experiences. Focusing on the education sector, in this paper we aim to contribute to the understanding of the relationship between PBA policies and teachers' emotions by conducting a scoping review of the scientific literature. Our review, which is based on a final sample of 63 articles published between

the years 2000-2021 obtained from the SCOPUS database, identifies two main bodies of research. The first deals with an examination of teachers' emotions and shows how PBA is a crucial part of a changing professional environment that accentuates and/or modifies feelings and emotions already inherent to the teaching profession. The focal point of the second strand of research is the effect of PBA on teachers' emotions; here, we identify research exploring the emotional effects of PBA, as well as the mechanisms behind different emotional experiences, how teachers deal with emotions emerging from PBA policies and a number of factors that intensify or weaken the emotional impact of PBA. On the basis of our review, limitations of existing research and gaps in the understanding of the relationship between PBA and teachers' emotions are identified and promising lines of future research formulated.

Keywords: accountability; standardized tests; datafication; teachers; emotions; new public management.

Resumen: La investigación han demostrado que, en muchos contextos, la transformación del sector público asociada con las reformas de la nueva gestión pública (NPM) y la rendición de cuentas basada en el desempeño (PBA) ha tenido profundas implicaciones para las prácticas, identidades y experiencias emocionales de los trabajadores del sector público. Centrándonos en el sector educativo, en este artículo pretendemos contribuir a la comprensión de la relación entre las políticas de PBA y las emociones de los docentes mediante la realización de una revisión de alcance de la literatura científica. Nuestra revisión, que se basa en una muestra final de 63 artículos publicados entre los años 2000-2021 obtenidos de la base de datos SCOPUS, identifica dos cuerpos principales de investigación. El primero trata de un examen de las emociones de los docentes y muestra cómo la PBA es una parte crucial de un entorno profesional cambiante que acentúa y/o modifica sentimientos y emociones ya inherentes a la profesión docente. El punto focal de la segunda línea de investigación es el efecto de PBA en las emociones de los docentes; aquí, identificamos investigaciones que exploran los efectos emocionales de PBA, así como los mecanismos detrás de diferentes experiencias emocionales, cómo los maestros manejan las emociones que surgen de las políticas de PBA y una serie de factores que intensifican o debilitan el impacto emocional de PBA. Sobre la base de nuestra revisión, se identifican las limitaciones de la investigación existente y las lagunas en la comprensión de la relación entre la PBA y las emociones de los docentes y se formulan líneas prometedoras de investigación futura.

Palabras clave: rendición de cuentas; pruebas estandarizadas; datificación; maestros; emociones; nueva administración pública.

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1. Introduction

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In recent decades, new public management (NPM) has influenced public sector reform worldwide (Common, 1998) with the aim to modernize and «de-bureaucratize» public administration (Bislev et al., 2002; Verger, 2012). Generally speaking, NPM reforms include a wide range of policies and measures, such as new, data-intensive accountability systems focused on performance results, decentralization of decisionmaking, competition between providers and the empowerment of users through «exit» and «choice» mechanisms (Clarke et al., 2000, p.6). In the education sector, NPM has resulted in an intensification of the «datafication» of schooling, which involves "
"«the collection of data on all levels of educational systems (individual, classroom, school, region, state, international), potentially about all processes of teaching, learning and school management» (Jarke & Breiter, 2019, p.1). Datafication is linked

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to the dissemination of new policy technologies, metrics, standardized tests and performance based-accountability (hereafter PBA) instruments.

Research has shown that in many contexts, the transformation of the public sector following NPM reforms has significant emotional effects on public sector workers (Dubnick, 2005). Focusing specifically on the education sector, educational research has highlighted that performance monitoring and PBA have affected and reshaped educators' practices, identities and experiences, as well as the possibilities of the teaching profession (e.g., Ball, 2003; Day & Smethem, 2009; Day, 2018; Holloway & Brass, 2018; Lewis & Hardy, 2018). Scholarly attention upon these aspects is not surprising considering the emotional nature of teachers' work. As argued by Hargreaves (1998, p. 838), teaching is an "emotional practice" which "activates, colours and expresses" the feelings of teachers and those with whom they work. Teachers' emotions, in turn, shape their relationships with students, parents and colleagues, as well as with school structures, pedagogy and educational reform. In this regard, we consider that it is essential not only to explore the emotions caused by PBA, but also to understand what role emotions have in the enactment of PBA policies and how teachers use them to cope with PBA pressures.

With this aim of contributing to this understanding, in this paper we attempt to bring together the academic literature produced within different disciplinary fields. Our goal is to provide an overview of knowledge on the relationship between PBA and teachers' emotions, to identify potential limitations of research on the topic and elaborate future lines of inquiry. To do so, we conduct a scoping review of the literature on teacher emotions and PBA, which is based on a final sample of 62 documents published between the years 2000-2021 obtained from the SCOPUS database.

Our review allowed us to identify two main bodies of research. The first deals with an examination of teachers' emotions, without specifically focusing on PBA. In this literature, PBA is a crucial part of a changing teaching environment that accentuates and/or modifies feelings and emotions already inherent to the teaching profession. In the second strand of research, the focal point is the effect of PBA on teacher emotions. More specifically, here we identify research exploring what kind of emotions are provoked by PBA policies in education, what mechanisms could explain different emotional experiences, how teachers deal with them, as well as what factors intensify or weaken the emotional effects of PBA.

The structure of the article is as follows. First, we describe the research methodology. Thereafter, we present the main findings, which are organized into two subsections. In the first subsection, we present the findings concerning the first body of research, while in the second subsection, we provide an overview of the studies that specifically analyse the relationship between PBA policies and teachers' emotions. The last section concludes the paper by discussing the findings, highlighting the main gaps of existing scholarship and giving insights on possible future lines of research.

2. Data and methodology

Considering the exploratory nature of this research endeavour, methodologically this paper relies on a scoping review strategy. This method enables researchers to map out the main bodies of literature existing on a particular topic by assessing existing studies that address the questions of the review (Petticrew & Roberts, 2006). In so doing, a scoping review can provide an overview of the main concepts underpinning a research topic and identify the sorts of studies carried out, as well as where they are published and what sorts of outcomes they have generated (Colquhoun et al., 2014).

To conduct our review on the relationship between emotions and PBA, we follow a research protocol consisting of a number of steps, as displayed in Figure 1. During the first step, we conducted a literature search using the SCOPUS search engine. The keywords we used were related to two main areas: PBA reforms and teacher affective dimensions (i.e., teacher emotions, teacher lived experiences, teacher subjectivities). The use of this syntax resulted in 127 articles. The whole syntax used can be found in the Annex.

Subsequently, a matrix containing information on each retrieved article (i.e., title, author(s), year of publication, keywords, abstract) was constructed. The matrix allowed us to screen the abstracts in the following manner. Two reviewers separately read each abstract and expressed an opinion on whether the article was to be included, excluded or whether the inclusion was doubtful. In case of disagreement between the two reviewers, or where one expressed doubt, a third (and then, if needed, a fourth) reviewer was involved in this first screening. In this phase, the decision about the inclusion/exclusion was taken with a majority criterion. Criteria for inclusion were: 1) the article must deal with PBA and emotions; 2) the article must focus on the teaching profession and on teachers; 3) the article must be centred on compulsory education¹. The first screening of the abstracts resulted in 85 articles.

The resulting sample was split into four and each quarter of articles was assigned to one author, who was in charge of downloading and carefully reading the assigned articles. In this phase, one article was excluded because it was unretrievable. Other articles (19 in total) were excluded because, despite the impression given by their abstract, they did not fulfil the inclusion criteria used during the first screening. In addition, we excluded three articles focused only on document analysis and without any empirical or reflective outlook on the relationship between PBA and teachers' emotions. Finally, we also excluded papers not written in English, nor in any language spoken by at least one of the authors. More specifically, this criterion resulted in the inclusion of one article in Spanish and one in Afrikaans, and in the exclusion of one article in Croatian. The second screening resulted in a final sample of 63 articles (see Figure 1).

We decided to focus exclusively on compulsory education because PBA has been particularly present at these educational levels, essentially under the form of national standardized assessments and teacher evaluation mechanisms.

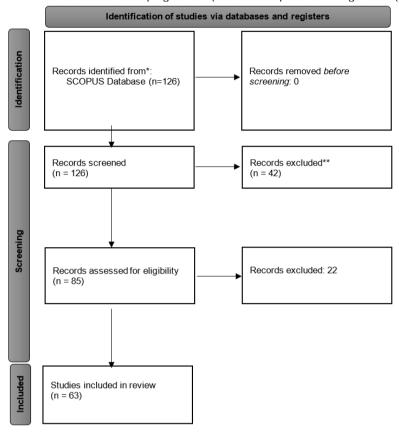


Figure 1. Flow chart of the scoping review (Source: adapted from Page et al. (2021)

The 63 included articles were published between 2003 and 2021. The majority used a qualitative methodological approach, four were based on a mixed-methods design and eight were theoretical reflections and/or literature reviews. Geographically, the articles selected encompassed a range of continents and different countries; a third focused on English-speaking countries (US, UK and Australia), while the rest were based in European countries (Spain, Norway, Cyprus, Ireland, Belgium), Asia (India, Singapore, China), Africa (South Africa) and the Middle East (Bahrain, United Arab Emirates).

We categorized and analysed the selected articles according to their theoretical framework, methodology, research question, geographical focus, discipline and main findings. Finally, to carry out the synthesis, we followed an inductive analytic strategy that was used to sort the articles following emerging analytic categories. Specifically, we grouped and analysed the articles thematically according to common broad themes (e.g., PBA as context, type of emotion, mechanisms, dealing with emotions, conditions) and subthemes (e.g., tension, reputation, agency, coping strategy, etc.),

which reflect the main contribution/s of the article in relation to the link PBA-teacheremotions.

3. Findings

Our review identified two main strands of research. The first deals with the exploration of teachers' emotions in general as well as with the identification of factors that shape and influence them. In this literature, the focus is not specifically on how PBA policies directly impact emotions. Rather, PBA policies are seen as part of a changing educational context that, with its new features, is reinforcing or modifying already existing mechanisms affecting teachers' emotionality. The second body of research specifically deals with the effect of PBA on teachers' emotions, trying to identify what types of emotions are generated by the existence of PBA in education, the mechanisms behind the emergence of these emotions and how teachers deal with them. This second strand of literature also highlights the conditions that can intensify or weaken teachers' experiences of the identified emotions.

3.1. Exploring teacher emotions: emotional rules and emotional labour in changing educational contexts

According to the first body of literature, one of the most important factors shaping teachers' emotions are the emotional rules attached to the teaching profession. These refer to expectations and norms about how teachers have to manage and make use of their emotions during their day-to-day work (Bodenheimer & Shuster, 2020) and about which emotions are permitted and/or considered appropriate. This means that teachers are expected to show—and ideally feel—a range of desirable emotions (such as empathy, calmness, kindness, compassion), thereby conforming to professional norms (Bodenheimer & Shuster, 2020). In contrast, teachers should also control and repress other emotions considered professionally unacceptable, such as anger, anxiety and vulnerability (Dunn et al., 2020). Emotional rules are seldom explicitly stated, but rather operate as tacit prescriptions in the form of ethical codes, pedagogical practices and techniques. Teachers are socialized into these rules and work roles, learning what they should and should not feel, and which feelings they should and should not show (Dunn et al., 2020).

Although emotional rules are often internalized and embodied by teachers (Dunn et al., 2020), their fulfilment requires constant and substantial emotional labour. As Bodenheimer and Shuster (2020) highlight, emotional labour is a concept introduced by Hochschild (1983) and defined by Morris and Feldman (1996, p. 987) as the effort, planning, and control needed to express organizationally desired emotions during interpersonal interactions'. The authors also remark how emotional labour, according to Hochschild (1983, p. 33), often involves surface acting, i.e., "portraying emotions to a public without actually feeling them". Emotional labour thus constitutes a rational act of self-regulation of emotions, which requires extreme intellectual work. In this sense, it challenges the common belief according to which emotions are antithetical to rationality (Dunn et al., 2020). The reviewed articles

point out how the daily enactment of emotions not aligning with inner feelings can lead to the experience of guilt, shame, frustration, vulnerability, anger (Dunn et al., 2020) and even to burnout (Bodenheimer & Shuster, 2020). These negative feelings, considered outlaw emotions, are often silenced (Dunn et al., 2020) or expressed exclusively in the private sphere (Steinberg, 2008).

There is broad agreement in the scholarly literature that the teaching profession is highly emotional but also highly regulated (Bodenheimer & Shuster, 2020; Chavez et al., 2021). The self-regulation of emotions, similar to what happens in other service-oriented/caring occupations, is considered inherent to the teaching profession. Nonetheless, various studies have pointed out how education policy reforms and changes in the structure of education might alter professional emotional rules and, consequently, expectations of emotional labour performed by teachers (Bodenheimer & Shuster, 2020). In this regard, PBA policies may reinforce emotional rules of impersonal distance, neutrality and disengaged objectivity (Steinberg, 2008). This increased focus on objectivity and neutrality make several scholars claim that the reforms implemented in the framework of NPM, especially PBA policies, neglect the intrinsic emotional nature of the teaching profession (Chavez, 2021; Perold et al., 2012).

Beyond this impact of accountability measures on reinforcing undesirable emotional rules, Steinberg (2008) argues that the increasing use of external standardized tests is also seen to accentuate already existing emotions. As her review of research on assessment and emotions shows, research has indeed claimed that teachers experience a range of emotions (e.g., irritation, stress, shame, disgust, guilt, pride, joy, sympathy) during the assessment process (Steinberg, 2008). External assessments are seen to intensify these emotions, although a number of factors intervene in this process. These include teachers' perceptions about who is responsible for low test results, teachers' beliefs about the validity of the test and the consequent (lack of) necessity to raise scores, teachers' perceptions and concerns regarding the emotional impact of testing and low test results on pupils, as well as whether results are made public (Steinberg, 2008).

3.2. Teacher emotions under PBA regimes

3.2.1. The emotional effects of PBA

Moving on to research that focuses specifically on the effect of PBA on teachers' emotions, this body of literature highlights a range of different emotional effects. On the one hand, research documents that teachers can experience positive emotions such as joy, pride and job satisfaction in the wake of PBA reforms (Holloway & Brass, 2017; Falabella, 2020). On the other hand, a wide range of reviewed studies report that teachers feel unpleasant and negative emotions deriving from PBA reforms, including unhappiness, irritability (van Wyk & Le Grange, 2016), stress, preoccupation, disillusionment (Murphy et al., 2020), frustration (Brown et al., 2018; Al-Whadi, 2020), fear (Aguilar et al., 2019), dissatisfaction, anxiety and pain (Rojas & Leyton, 2014), as well as feeling drained, confused, demoralized and criticized (Steinberg, 2013).

More specifically, different investigations refer to the «emotional costs» of PBA and how these are also associated with adverse effects on teachers' subjectivity and well-being (Braun & Maguire, 2020, p.11; Lambert & Gray, 2021). For example, qualitative research in Chile shows how PBA contributes to creating an environment of teacher discomfort, which is expressed through anger and fatigue as moods (Aguilar, 2019). Adverse effects on teachers' mental health and well-being have been also documented in the case of early-career teachers in Australia (Lambert & Gray, 2021), as well as in the UK context where teachers were found to experience severe stress and depression deriving from accountability surveillance measures (Hebson et al., 2007). Some papers also highlight how PBA can contribute to damaging trust between staff (van Wyk & Le Grange, 2016) or generating feelings of resentment amongst teachers (Niesz, 2010).

In other cases, it appears that as a consequence of PBA reforms, teachers can experience both positive and negative emotions at the same time (Al-Wadi, 2020). Indeed, the way PBA influences teacher emotions is complex and the reviewed literature recognizes both the "pleasures" and the "terrors" related to PBA reforms (cf. Holloway & Brass, 2018, p.380). That is, performativity cultures associated with PBA exert continual pressure on teachers but, paradoxically, can also form a crucial source of professional job satisfaction (Troman et al., 2007), thus leading to the experience of mixed emotions, including joy as well as sadness, frustration, anger and fear (Zhang & Tsang, 2021). In some cases, an increase in stress and preoccupation with results seems to lead to feelings of disillusionment with the chosen career. The contradictory emotional effects on teachers, documented by various studies, suggest that PBA differently shapes teachers' well-being, self-efficacy, competence and subjectivities (Murphy et al., 2020).

3.2.2. Mechanisms behind the emotional effects of PBA

In the reviewed literature, a number of explanations are put forward for the emotions that teachers experience as a result of PBA reforms. These explanations relate to (a) the embodiment of performance indicators as a valid proxy of professional success; (b) the datafication of education; (c) the material consequences of PBA reforms; (d) the competition between already internalized emotional rules, established beliefs about good teaching and the new prescriptions/expectations promoted by PBA.

To start with the first explanation, several studies highlight how teachers' emotional experiences can be explained as a result of teachers normalizing hyperperformativity and competition, and embodying new understandings of «the good teacher» as promoted by PBA reforms (e.g., Webb, 2005; Falabella, 2020; Lambert & Gray, 2021). When results are increasingly seen as a valid proxy of professional success, high performance can result in positive emotions and feelings of pleasure. On the other hand, failure to live up to the internalized ideal of «the good teacher» can result in a range of negative emotions, including disappointment, self-doubt and shame. For example, by conducting research in the Chilean context, Falabella (2020) shows how PBA affects teachers' self-image and identity as professionals, as well as their personal ego. PBA is thus conceived as a powerful policy technology

that can shape who a teacher is and who a teacher aspires to be. Consequently, PBA can trigger feelings of fear in teachers, but at the same time "produce commitment and dedication with seductive offers for self-enhancement" (Falabella, 2020, p. 31). While this explanation highlights the seductive power of performance metrics, it simultaneously emphasizes how PBA can contribute to an environment of professional insecurity and can produce a set of psychic and social costs (Braun & Maguire, 2020; Falabella, 2020).

A second explanation for the emotional effects of PBA on teachers relates to the public exposure of the teaching profession, following the public dissemination of data, and the associated risk of being judged with a potential effect on social recognition and teachers' professional reputation. As pointed out by Pierlejewski (2020, p. 472), this can lead to the fear «of not producing the right kind of data», thereby discouraging teachers from engaging with creative or innovative pedagogical practices and strongly limiting their agency. As such, the significant amount of data nowadays collected about teachers and their pupils can have the power to modify and regulate the subjectivities of its objects, thereby serving as a regulatory device. As the reviewed studies show, the fact that performance data are often made visible, not only among school actors but also among external audiences such as school administrative bodies, inspection regimes, parents and media, can produce feelings such as anxiety and stress related to the fear of public humiliation and/or loss of social recognition (Kelchtermans et al., 2009; Niesz, 2010; Lewis & Hardy, 2015; Brown et al., 2018).

A third explanation for the emotional effects of PBA is put forward by studies that focus on the material consequences attached to PBA policies. In particular, in contexts where significant material stakes are attached to performance, such as hiring and firing decisions or financial incentives or sanctions, studies document a range of emotional effects on teachers. For example, research in Chile shows how teachers can experience fear of the material consequences attached to performance indicators, which results in feelings of anxiety and stress (Aguilar, 2019).

Finally, a fourth mechanism behind the emotional effects of PBA relates to the emotional tension that emerges from the competition between the new emotional rules, prescriptions and expectations generated by PBA reforms and already internalized emotional rules. PBA policies, and their focus on performing, might indeed obscure and undermine the traditional focus of teaching on caring and nurturing. In this sense, existing research reports how teachers struggle to hold both roles in balance (Perold et al., 2012). Consequently, teachers are found to experience internal conflicts between deeply rooted emotional rules concerning the caring and relational nature of the teaching profession, and external beliefs about good teaching, normally involving a new jargon made up of concepts such as efficacy and effectiveness (Kelchtermans, 2016). As highlighted by Pereira (2018), neoliberal accountability practices cause teachers to feel a constant sense of being pulled in different directions, which results in emotional tension that is manifested in the double stress of having to reach out to students emotionally and having to meet the expectations of the school and school evaluators. According to Kelchtermans (2016, p. 3), teachers generally «feel not only "accountable" for their pupils' measurable outcomes, but also "responsible" for their pupils as human beings». This means

that it is arduous, or even impossible, to maintain emotionally neutral and objective teacher-pupil relationships, as PBA policies require. This misalignment between teachers' models of good teaching and those promoted by PBA policy discourses (e.g., Tsang, 2019; Chandran, 2021) is therefore put forward as a key explanatory factor for teachers' negative emotional experiences following PBA reforms. Moreover, the intensification of tasks and responsibilities in order to meet the accountability expectations can contribute to the need to adapt practices in ways that do not align with teachers' perceptions of good teaching, giving rise to negative emotions such as dissatisfaction, frustration, powerlessness and meaninglessness (Tsang & Kwong, 2017; Inostroza, 2020; Chandran, 2021).

3.2.3. Dealing with the emotional effects of PBA: teacher agency and coping strategies

Beyond identifying the emotional effects of PBA on teachers and highlighting how emotional effects can be explained, various studies have also attempted to gain a deeper understanding of how teachers deal with the emotional effects of PBA. More specifically, a number of reviewed articles highlight how negative emotions emerging from PBA may have teachers engaging less with innovative or alternative pedagogical practices (Steinberg, 2008; Niesz, 2010; Terhart, 2013). For example, Lechasseur (2015) shows how pressure coming from accountability represents one of the major obstacles for teachers' engagement with alternative practices. One explanation for this finding is related to teachers' desire to avoid painful emotions following low results (Steinberg, 2008). Innovative practices, which require time and attention, would expose teachers to a higher risk and feelings of uncertainty, as they might even think they cannot 'waste time' on something that does not directly contribute to improving standardized test results (Falabella, 2020). Another explanation for this finding is connected to the adoption of an «instrumental and technical orientation to change» (Niesz, 2010, p. 389), which contributes to responding effectively to accountability demands (i.e., building up the image of a good school), even when it means to contradict educational and pedagogical values related to innovation (Niesz, 2010). Finally, this might represent a form of «pragmatic compliance» or resignation (Keddie, 2018; cited by Braun & Maguire, 2020, p. 8). In the English school system, for example, Braun and Maguire (2020, p. 8) observed how the participants in their study «were arguably also compliant» but simultaneously felt «a sense of deep unease».

A range of studies also highlight how teachers can develop different coping strategies to deal with the tension of conflicting priorities and demands (Kelchtermans, 2016). Some of these studies show how teachers can mobilize emotions as a way to deal with the pressures and tensions coming from PBA reforms. For example, in the Chinese context, Huang and Vong (2015) show how positive emotions linked to Confucian philosophy are mobilized by teachers as a resistance strategy against PBA pressures. In the Irish context, Murphy et al. (2020) detect the potential to construct alternative conceptions to those embedded within PBA systems, by being reflexive and aware of the tensions experienced and by taking «an active role in

their self-definition» (Murphy et al., 2020, p. 598). In Chile, Rojas and Leyton (2014, p.209) identify forms of resistance towards PBA policies that are enacted through «self-care tactics», which allow teachers to reconstruct their image as professionals. Nevertheless, representations of teachers' exhaustion and submission are also widespread among the participants in this study. In this regard, Waite (2011, p. 66) observes how teachers often «remain caught between perceived risks of resisting a system judged by narrow assessment criteria and an apparent warrant to embrace self-determination». Eventually, this tension might even lead to teachers feeling «emotionally out of control» (Steinberg, 2013, p. 438).

3.2.4. Between PBA and teacher emotions: factors intensifying or weakening the emotional effects of PBA

Beyond offering explanations for the emotional effects experienced by teachers as a result of PBA reforms, the reviewed literature allowed us to identify a number of factors that seem to influence the relationship between PBA and teacher emotions. These factors provide a sense of the conditions under which the emotional effects of PBA on teachers might either be intensified or weakened. The factors we identified belong to macro-level system structures, meso-level school factors and individual-level factors (i.e. teacher biographies and professional characteristics). It is relevant to mention that some of these factors can correlate with each other.

Macro-level factors: systemic environment and cultural norms

Existing research highlights that systemic and cultural aspects can influence how teachers perceive and enact PBA, and their feelings towards these reforms. Teachers' position in the governance structure seems to play a role in shaping their emotional experiences of PBA (Chandran, 2021; Niesz, 2010). More concretely, teachers' subordination to the local authority (Chandran, 2021), as well as hierarchical relationships inside schools (Niesz, 2010), are found to generate more negative feelings towards PBA reform.

Cultural and societal values have been also found to play an important role in influencing teachers' emotional experiences of accountability reforms (Chandran, 2021; Huang & Vong, 2015; Mooney et al., 2020; Steinberg, 2013; Zhang & Tsang, 2021). A review of Ireland's official policy documents highlights, for instance, how a traditionally Catholic culture—which emphasizes morality and consensus to norms and standards—shapes teachers' subjectivities in the direction of technocracy, thereby reducing their creativity, pleasure and autonomous judgement (Mooney et al., 2020). Other examples are located in the Chinese context, where the traditional Confucian philosophy—associated with moral knowledge, harmony and appropriate behaviours—seems to influence the way teachers manage their emotions under PBA by generating spaces of empowerment (Huang & Vong, 2015) or leading to more rational knowledge and comprehensive understandings (Zhang & Tsang, 2021).

Meso-level factors: the importance of school culture, student composition and internal relationships

Another group of articles highlight school-level aspects that play a strong role in influencing the relationship between PBA and teachers' emotional experiences, namely, the school culture, the socioeconomic background of the student population and the quality of relationships among school actors.

First, it seems that different feelings emerge within different school cultures (Ibrahim, 2020; Kostogriz & Doecke, 2013; Kelchtermans et al., 2009). More specifically, a collaborative school culture is associated with teachers experiencing fewer negative emotions in accountability environments. Such a culture is characterized by interdependent teachers «sharing a common vision and responsibility to enhance student learning» (Ibrahim, 2020, p.5) or a shared «working consensus» related to shared implicit norms, values and practices amongst school staff (Kelchtermans et al., 2009, p.225).

Beyond school culture, teachers' emotional experiences of PBA policies seem to intensify in schools that cater to disadvantaged student populations (e.g., Falabella, 2020; Steinberg, 2013; Steinberg, 2008; van Wyk & Le Grange, 2016). Several articles show that in such schools, teachers may experience an «overwhelming sense of failure» (Steinberg, 2013, p. 438), as well as higher levels of dissatisfaction, anxiety and insecurity in their teaching, by not being able to generate adequate student achievement. The latter might be due to the perceived inappropriateness of curriculum pace and pedagogy (Steinberg, 2013), or derive from comparisons with schools catering to middle-class students (Kelchtermans et al., 2009). Teachers working in lower socioeconomic environments are also found to do more emotional labour in order to maintain a balance between trying to meet the accountability demands and being patient and creative with students' slow progress (Steinberg, 2013).

Finally, the quality of relationships among school actors seems to influence teachers' perceptions and emotional experiences of PBA policies. These can refer to teacher-principal relationships, relationships amongst teachers and teacher-student relationships. Some studies highlight how the principal can mediate teachers' emotional experiences of PBA policies (Bodenheimer & Shuster, 2020; Kelchtermans et al., 2009). Principals are indeed considered key in reducing negative emotions generated by PBA and in minimizing teachers' burnout (Bodenheimer & Shuster, 2020) by providing understanding, support and clear directions (Kelchtermans et al., 2009). Although relational aspects of teachers' work can be affected under accountability environments (Mausethagen, 2013), Mahony et al. (2014) show how a good working relationship amongst teachers can make teachers experience assessment policies more positively compared to those who carried out the task in isolation (Mahony et al., 2004). The former group of teachers also seemed to experience higher teacherpedagogical well-being and self-care (Murphy et al., 2020), higher motivation and efficacy (Mausethagen, 2013) and managed uncertainty in a better way (Gu, 2014). The same can be said about teacher-student relationships: although student-teacher relations may be negatively affected by the PBA regime (Mausethagen, 2013), a good relationship with students, high student engagement and teachers' recognition of the importance of "building a rapport with the students" are found to positively influence teachers' emotional experience and well-being by providing a sense of self-care in face of performative demands (Murphy et al., 2020, p.597).

Teacher-level factors: professional and personal characteristics

Teacher-related factors belong both to their working conditions and to their individual sense-making and personal characteristics. For example, years of experience in education may influence teachers' attitudes towards the policy and, specifically, the degree of acceptance of the reform. Early-career teachers seem to more often accept the employment conditions and the reform pressures as given (Lambert & Gray, 2021), or engage with them pragmatically and efficiently, instead of opposing them (Terhart, 2013). This may be explained by "the need to "fit in" the normalizing cultural apparatus as a driving force for new teachers to secure ongoing employment" (Lambert & Gray, 2021, p. 7). Nonetheless, the acceptance of such conditions reflected a state of anxiety and has a detrimental impact on teachers' mental health (Lambert & Gray, 2021).

The subject taught is also found to play a role in how teachers are emotionally affected by PBA. Interestingly, teachers who do not teach a subject that is tested in the school are also found to experience stress and frustration (Brown et al., 2018; Lambert & Gray, 2021; Shaw, 2016). This seems to happen because accountability measures produce a number of changes in schools that indirectly affect teachers whose subjects are not evaluated in the test. Examples include changes in workload, staff relations and working conditions, or teachers having to support other subjects' test scores (maths and reading), all of which add to their day-to-day stressful occupation (Shaw, 2016).

Other aspects related to teachers' professional status that influence the relationship between PBA and teacher emotions are whether teachers have any leadership responsibilities (Niesz, 2010), their contract status (Tsang, 2019; Lambert & Gray, 2021) and whether or not they participate in training activities on the national test (Al-Wadi, 2020). More specifically, holding a leadership position has been found to increase teacher isolation and resentment, consequently negatively affecting the change and innovation that teachers may bring to the school (Niesz, 2010). The sense of powerlessness generated by the accountability environment is intensified for teachers without permanent contracts (Tsang, 2019). More specifically, research highlights that the "casualization", "flexibilization" or even "flexploitation" of the teaching workforce (Charteris et al., 2017), i.e., the tendency towards precarious working conditions, employment uncertainty, poor access to professional development opportunities, lower salaries and disconnection from teaching unions, has been found to increase the likelihood of experiencing harmful emotions such as powerlessness, anxiety and marginalization (Charteris et al., 2017).

Finally, teachers' participation in orientation sessions about the design of the test and its items is found to generate positive reactions, resulting in teachers judging the test as clear and useful. This is in contrast to teachers who did not participate in these training sessions and who felt the application of the tests was "stressful", "demanding", "confusing" and "difficult" (Al-Wadi, 2020, p. 211).

Individual sense-making and the personal characteristics of teachers also appear as crucial factors influencing how emotions in relation to PBA are experienced. Following the idea of emotions being rooted in cognition and evaluation (Nias, 1996, cited in Keltcherman et al., 2009; Nausbaum, 2001, cited in Steinberg, 2013), the emotional experience of teachers seems mediated by their personal beliefs, thoughts and values. A number of articles confirmed the existence of such interpretative lenses by which, although working in similar contexts, teachers' affectivities are personal and unique, and shaped by their own beliefs, perceptions and judgements (Perold et al., 2012; Shaw, 2016; Smyth, 2003; Steinberg, 2008). For instance, although located in the same disadvantaged context, some teachers manage to gain «agency» and selfconfidence which make them experience and respond to the performance regime in a less powerless and passive way (Perold et al., 2012). In another way, teachers' emotions are interwoven with their beliefs and educational goals. When educational goals are aligned to accountability demands, teachers experience a lower degree of stress (Shaw, 2016). Similarly, Steinberg (2008) found that teachers' beliefs about the validity of a test influences their emotional experience towards reform. In this line, teachers' pedagogical identity and task perceptions are found to play a role in how they experience and respond to changes in school reform and how they interpret the expectations deriving from such changes (Kelchtermans et al., 2009; Smyth, 2003). Whether teachers believe their role is to benefit students, care for their emotional well-being, or focus on students with special needs differently affects how they respond to calls for change, how they feel about such changes and their adopted practices (Kelchtermans et al., 2009). In other words, «educational discourses and practices are deeply interwoven with teachers' own narrative conceptions of their identities» (Smyth, 2003, p. 272).

Finally, personal characteristics such as age and gender are also found to play a role in how teachers experience PBA policies. Older teachers are found to experience performance demands and related work in such contexts more negatively. This may be explained by a loss of enthusiasm and motivation for education (van Wyk & Le Grange, 2016), or a higher insecurity in dealing with rapid school changes and changes in their teaching purpose in the later stages of their careers (Hebson et al., 2007). In relation to gender, the emotional rules of teaching are considered both gendered and historically contingent (Zembylas, 2002, cited in Dunn et al., 2020). Consequently, women teachers were found to respond to policy in a «gendered» manner, underrating their achievements and feeling «less» than men (Mahony et al., 2004, p.446) or conceptually pictured as «mothers and selfless saviours» encouraged to regulate their minds and emotions and sacrifice themselves to achieve higher educational standards (Dunn et al., 2020, para.8).

4. Discussion and conclusions

By conducting a scoping review of the scientific literature, we have shed light on the relation between PBA policies and teachers' emotions and have identified a number of trends in current research on this topic. First, it appears that in different contexts worldwide, PBA policies are a crucial part of a changing educational environment. More specifically, various studies highlight how PBA policies can

reinforce undesirable emotional rules, including those that stipulate impersonal distance, neutrality and disengaged objectivity (Steinberg, 2008). These new rules can have an important effect on accentuating feelings and emotions that are already inherent to the teaching profession.

Other studies specifically focused on the effects of PBA policies on teachers' emotions. This body of research shows how teachers can experience a range of different emotions following PBA reforms, including feelings of anxiety, frustration, shame and anger. A number of studies point out that the prescriptive cultures of neoliberal accountability and performativity have contributed to a widespread lack of deep trust in teachers' professional standing and judgement, and to increased levels of professional vulnerability and stress (e.g., Kelchtermans et al., 2009). Although in the reviewed literature PBA seems to predominantly generate unpleasant and negative emotions experienced by teachers, our review also identified different investigations that add a note of caution to this assumption, suggesting that the relationship between PBA and emotions can work in multiple ways and directions. Indeed, a few studies also document positive emotions, such as joy and pride. This highlights how teachers can also experience the pleasures of performativity (cf. Holloway & Brass, 2018); as argued by Falabella (2020), this might relate to the seductive power of performativity.

According to the reviewed research, several mechanisms might explain the documented emotional effects. Some of these mechanisms might be the embodiment of performance indicators and performance data as proxies of professional success and/or as powerful determinants of social recognition and professional reputation. Other explanations are connected to the consequences of PBA and to the severe emotional tensions between internalized professional values, rules and preferences and the new demands and prescriptions of PBA reforms.

The existing literature also highlights how the ways in which teachers deal with emotions is complex (Falabella, 2020); emotions can sometimes be used as strategies to deal with the tensions and pressures generated by PBA policies and to cope with the emotional effects of PBA. In this sense, emotions seem to be not only states that are passively felt, but also as states that can be consciously «activated».

Our review also shows how, despite the promise of PBA reforms of fostering educational quality and pedagogical change (cf. Diamond, 2007), the emotional effects of such reforms can, in some cases, lead to a reduction in the use of innovative or alternative pedagogical approaches by teachers. This seems to be because the fear of obtaining bad results in standardized tests or of not producing the «right data» (Pierlejewski, 2020, p.472) discourages teachers from taking the risk and the time to innovate (Falabella, 2020).

The different cases covered by the reviewed literature demonstrate how similar emotional effects of PBA are experienced by teachers located in contexts that differ significantly from one another. This suggests how some emotional experiences might constitute an integral part of accountability reforms. Yet, the reviewed literature also highlights how specific features of PBA policies, characteristics and configurations of the education system, as well as specific cultural and institutional traditions, might have a crucial influence on the way in which (and intensity with which) emotions coming from PBA are felt. Moreover, different studies show how numerous factors at

the meso-level (school) and micro-level (individual) can also intensify or weaken the emotional effects experienced by teachers.

The existing research has therefore contributed in important ways to our understanding of the relationship between teachers' emotions and PBA policies. Nonetheless, our scoping review also identified a number of limitations by which the existing literature is characterized. Future research could address these limitations in order to advance our understanding of teachers' emotional experiences of PBA reforms. For example, the literature commonly lacked detail about research participant recruitment and/or selection. As a result, it was difficult to evaluate the extent to which the reported emotional experiences belonged to a specific group of teachers (e.g., those more positive or more critical towards PBA reforms).

In addition, we noted that the topic of teachers' emotional experiences following PBA reforms has been predominantly addressed by studies using a qualitative research design. Considering the nature of the topic, this is perhaps not surprising. Nonetheless, while qualitative studies can help deepen understanding of the complex relationship between PBA and teachers' emotions, they do not always show how widespread particular emotional experiences are. Studies relying on robust mixed-methods designs would be especially valuable in this regard. In a similar vein, quantitative studies could try to examine how different factors interact in generating particular emotional experiences. Here, it is worth noting that field experiments also form a promising methodological approach to researching the emotional impact of PBA policies and some of their specific features. They may also help to examine the interactions between different factors and conditions in intensifying or weakening this effect.

It became clear that existing research often treats teachers as a homogenous group of professionals. An assumption underpinning some of the reviewed studies seems to be that teachers are socialized in the same way and that emotional rules of the teaching profession are the same for all teachers. As socialization processes differ according to contextual features, individual background and characteristics, future research might want to devote more attention to how teachers' social origins and class backgrounds influence the way they experience emotions under PBA regimes. Emerging research exploring the influence of cultural values on teaching emotional rules and emotional experiences related to PBA (Chandran, 2021; Huang & Vong, 2015; Mooney et al., 2020; Steinberg, 2013; Zhang & Tsang, 2021) constitutes another promising avenue that should be continued by further research in different contexts.

Finally, studies on this topic produced within different scholarly traditions are currently being performed in disciplinary silos with no mutual recognition. By conducting a review of existing research and by providing an overview of what is known about this research topic, we hope to have contributed to the integration of these bodies of literature and allow future studies to build on previous research. We emphasize the need for future research that takes an interdisciplinary approach in order to build on insights derived from different disciplines.

In addition to the promising lines of future inquiry that have already been mentioned, we would add that some of the findings of our scoping review point to additional directions for future research. For example, a key finding of our review is that emotions are not only an effect or consequence of PBA reforms, but can also be a resource when dealing with some of the pressures and tensions that emerge from PBA. Future research should pay more attention to this transformative potential of emotions. In a similar vein, the findings highlight a discrepancy between studies that place emphasis on teachers being disciplined by performativity, leaving little room for teacher agency and studies that do allow for the latter. Here, a question remains as to what extent teachers can play an active role in mastering the emotional effects, e.g., by activating emotional responses. Finally, more critical research is needed on the often-assumed link between PBA and innovative pedagogy and creativity, paying particular attention to how emotions play a crucial role in mediating this relation.

Our review contains some limitations. Our search relied on one database and on English keywords. Although we consider SCOPUS as the most reliable and comprehensive database, future studies might want to extend the search to other databases and to articles that do not contain an abstract in English.

To conclude, our scoping review has highlighted the need for continuing research on the complex relationship between PBA reforms and teacher emotions, and the benefits of bringing together different areas scholarship on this topic, not only to provide a more comprehensive understanding, but also to make fruitful interdisciplinary collaborative efforts possible.

Authors contribution

Authors are listed alphabetically. All authors contributed equally to the manuscript.

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Teaching as affective labour in a datafied world: a scoping review of the relationship between performance-based accountability and teachers' emotions

Annex

Figure 2. Syntax

(TITLE-ABS-KEY ("accountability" or "performativity" or "standardi* test*" OR "teacher evaluation")) AND ("teacher* emotion" OR "teacher* affect" OR "teacher subjectivity" OR "teacher lived experience")

