Building an explanatory framework for co-workers' responses to teacher underperformance☆

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ABSTRACT

Underperforming teachers can have a profound negative impact on their students, principals and co-workers, and the educational quality in their schools. Since little is known about how and why co-workers respond to teacher underperformance, this study aims to build an explanatory framework for different types of co-workers' responses. The results of our survey study indicate that co-workers' responses can partly be explained by how they consider their responsibility and authority to respond, as well as the use of responding. These considerations are, in turn, influenced by different underperformance, underperformer, co-worker, leadership and team characteristics. We discuss how co-workers' responses to teacher underperformance can be facilitated.

1. Introduction

International research indicates that 1 to 28 % of teachers perform below the standard (Kraft & Gilmour, 2017; Menuey, 2007; Pugh, 2014; Yariv, 2004). These underperforming teachers can have a profound impact on students, principals, co-workers and schools as a whole. Findings from over four decades of school effectiveness research have shown that the quality of teachers outperforms school features and classroom features in explaining variation in pupils' learning outcomes (Hanushek, 2008; Marzano, 2012; Range, Duncan, Scherz & Haines, 2012; Rivers & Sanders, 2002). Underperforming teachers also impact on students' well-being and motivation (Banfield, Richmond, & McCroskey, 2006; Kaye, 2004; Zhang, 2007). Moreover, underperforming teachers cause concerns among principals who experience numerous difficulties and barriers when attempting to address the underperformance (Le Fevre & Robinson, 2014; Page, 2016; Van Den Ouweland, Vanhoof, & Roofthooft, 2016; Causey, 2010; Mendez, 2009).

Next to students and principals, co-workers are an important party to consider as well. In education, teacher collaboration and team work have become vital for teacher development and school effectiveness (Tam, 2015; Vangrieken, Dochy, Raes & Kyndt, 2015). With increased collaboration, co-workers may be more aware of certain performance problems than their principals (Richardson, Wheeless, & Cunningham, 2008), and may be more impacted upon by teacher underperformance (Felps, Mitchell, & Byington, 2006; Lepine & van Dyne, 2001; Taggar & Neubert, 2004). Research suggests that underperforming teachers can erode the morale and energy of co-workers, and cause frustration, concern and despair (Kaye, 2004; Menuey, 2007; Page, 2016). At the same time, co-workers can also have a beneficial impact on this underperformance (e.g., by providing peer support and coaching) (Cheng, 2014; Flesch, 2005; Rhodes & Beneicke, 2003; Wragg, Haynes, Wragg, & Chamberlin, 1999; Yariv, 2011; Yariv & Coleman, 2005). In addition, principals often lack time to manage teacher performance and underperformance on their own, and may not be able to judge all aspects of the (under)performance as well as other teachers (Darling-Hammond, 2013).

Despite the potential of co-workers to impact on teacher underperformance, research focuses largely on principals' responses, and it is unclear how co-workers tend to respond. With this study, we therefore aim to obtain more insight in how and why co-workers respond in certain ways when they perceive a team member to underperform, to give us more insight into which factors can stimulate responses, or, in

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turn, prevent co-workers from responding. Moreover, while existing research mostly studies co-worker responses in hypothetical situations, we aim to study co-worker responses to real cases or incidents of underperformance that took place in their schools. Therefore, we build a research model based on the scarce educational research on co-workers' responses to underperformance, enriched with evidence from attribution studies, studies on peer report of counterproductive work behaviours and voice & silence studies, and test this framework in a large sample of primary and secondary school teachers.

2. Literature overview

2.1. Conceptualising teacher underperformance

Teachers have comprehensive jobs. While student learning is teachers' primary responsibility, teachers also have non-teaching responsibilities, including collaborating with co-workers and parents (Stronge, Ward, & Grant, 2011; Yariv, 2004). Therefore, types of teacher underperformance may also include non-teaching types of underperformance, such as not fulfilling administrative tasks, missing deadlines or breaching agreements made with colleagues. Moreover, underperformance may concern task underperformance, i.e. performing one's tasks/roles below standard, such as difficulties with classroom management, or inadequate teaching content, but also counterproductive work behaviours (CWB) or misbehaviours, which are "volitional acts by employees that potentially violate the legitimate interests of, or do harm to, an organization or its stakeholders" (Marcus, Taylor, Hastings, Sturm & Weigelt, 2016, p.204). These include aggression towards co-workers, intentional lack of effort, inappropriate behaviour towards students and intentionally violating school rules (Page, 2016; Richardson et al., 2008). Teacher performance is also a dynamic construct: individual work performance changes over time and throughout one's career, with more long-term and more contemporary changes in performance, and potential periods of underperformance (Alessandri, Borgogni, & Truxillo, 2015; Campbell & Wiernik, 2015; Day & Gu, 2007). Causes of teacher underperformance are multi-faceted and involve a combination of individual and job-related factors: these include improper management and poor supervision, team factors, demands inherent to the teacher's assignment, organisational resources for the teacher to meet these demands, shortcomings of the teacher, and teachers' personal resources (Bridges, 1992; Monteiro, Wilson, & Beyer, 2013; Rhodes & Beneicke, 2003; Yariv, 2011).

The term 'underperformance' implies that a teacher performs below a certain standard. Researchers and policy makers have developed teacher standards and frameworks with performance domains, criteria, and indicators that can be used to judge a teacher as underperforming (e. g., Danielson, 1996; Doherty, Hilberg, Epaloose & Tharp, 2002). Teacher (under)performance is also subject to evolving requirements and expectations (e.g., evolutions towards co-teaching and ever-changing curricula). Moreover, despite the existence of standards, it remains a value-laden concept (Cagle & Hopkins, 2009; Day & Gu, 2007; Harris & Rutledge, 2010). Principals, teachers, parents, students, scholars and governments all have their own views on good teaching and these personal beliefs might differ (Cheng & Tsui, 1999; Moreland, 2009; Rhodes & Beneicke, 2003; Wragg, Haynes, Phil, Wragg, & Chamberlin, 1999). In addition, different terms have also been used to indicate that a teacher performs below standard, such as 'ineffective teacher' (Nixon, Packard & Dam, 2013), 'poorly performing teacher' (Rhodes & Beneicke, 2003; Yariv, 2009), 'incompetent teacher' (Cheng, 2014), 'challenging teacher' (Yariv, 2004), and 'marginal teacher' (Menuey, 2007). Bridges (1992), for example, defines teacher incompetence as "a persistent failure in one or more of the following domains: failure to maintain discipline, failure to treat students properly, failure to impart subject matter effectively, failure to accept teaching advice from superiors, failure to demonstrate mastery of the subject matter being taught, and failure to produce the intended or desired results in

the classroom" (p.15). Yariv (2004) talks about 'challenging teachers' to refer to those who pose a particular challenge to the principal in terms of how to manage them.

For this study, we chose the term 'teacher underperformance' because it indicates that one performs below standard, without a priori adjudicating on the severity, impact, cause or type of the underperformance. We define an underperforming teacher as one who: performs below standard; in one or more teaching and/or non-teaching work domains; at one or more moments. This underperformance may include task underperformance and/or counterproductive work behaviour. Moreover, we focus on underperformance in the eyes of co-workers: we study co-workers' responses in cases where they perceive a teacher to underperform, based on their own judgment.

2.2. Explaining co-workers' responses to teacher underperformance

While research on co-workers' responses to teacher underperformance is rather scarce, we build a research model (Fig. 1) by bringing together this scarce evidence with research evidence from three research strands found in other work sectors, i.e. attribution theory studies; studies on peer report of counterproductive work behaviours (CWBs) and deviance, and voice and silence research. Attribution theory studies (e.g., Jackson & LePine, 2003; Taggar & Neubert, 2008) and peer report studies (e.g., Bowling & Lyons, 2015; Gruys, Stewart, & Bowling, 2010) focus specifically on co-worker underperformance. Voice and silence research (e.g., Morrison, 2014; Vakola & Bouradas, 2005) has a broader focus: it studies voice or silence about workplace problems and perceived injustices more generally. This research has found that concerns about a co-worker's underperformance are the hardest for workers to voice (Henriksen & Dayton, 2006; Milliken, Morrison, & Hewlin, 2003).

2.2.1. Types of co-worker responses

Since this is one of the first large scale studies on the subject in education, we planned an exhaustive study of different co-worker responses to teacher underperformance. We firstly included responses found in attribution studies, which often make a distinction between compensation (e.g., taking on some of the underperformer's tasks), training (e.g., advising the underperformer), confrontation or motivation (e.g., pointing out consequences of poor performance) and rejection of the underperformer (e.g., avoiding further interactions) (Ferguson, Ormiston, & Moon, 2010; Jackson & LePine, 2003; Lepine & van Dyne, 2001). Studies on both peer reporting of CWB and voice and silence studies focus on responses directed towards third parties, i.e. speaking up or remaining silent to one's supervisor and/or other co-workers (Morrison, 2014; Vakola & Bouradas, 2005). Based on this research, in our research model (Fig. 1) we included three types of co-worker responses directed towards the underperformer: confronting or speaking up to the underperformer, providing the underperformer with support or advice and distancing oneself from the underperformer, and three more indirect responses: compensating for the underperformance, reporting the underperformance to the principal and reporting the underperformance to other co-workers.

2.2.2. Co-workers' considerations about responding

In our research model (Fig. 1), we included four possible considerations that co-workers make when deciding how to respond to a team member's underperformance. These are primarily based on findings from a small-scale qualitative study in education, in which teachers discussed how they considered the necessity to respond, as well as their responsibility and mandate/authority to respond, and the expected use/ impact of responding when deciding how and why to respond to the underperformance (Van Den Ouweland, Vanhoof, & Van den Bossche, 2019). Concerning their responsibility to respond, it was found that teachers respond when they feel responsible for the school, their students and other affected team members (Van Den Ouweland et al.,
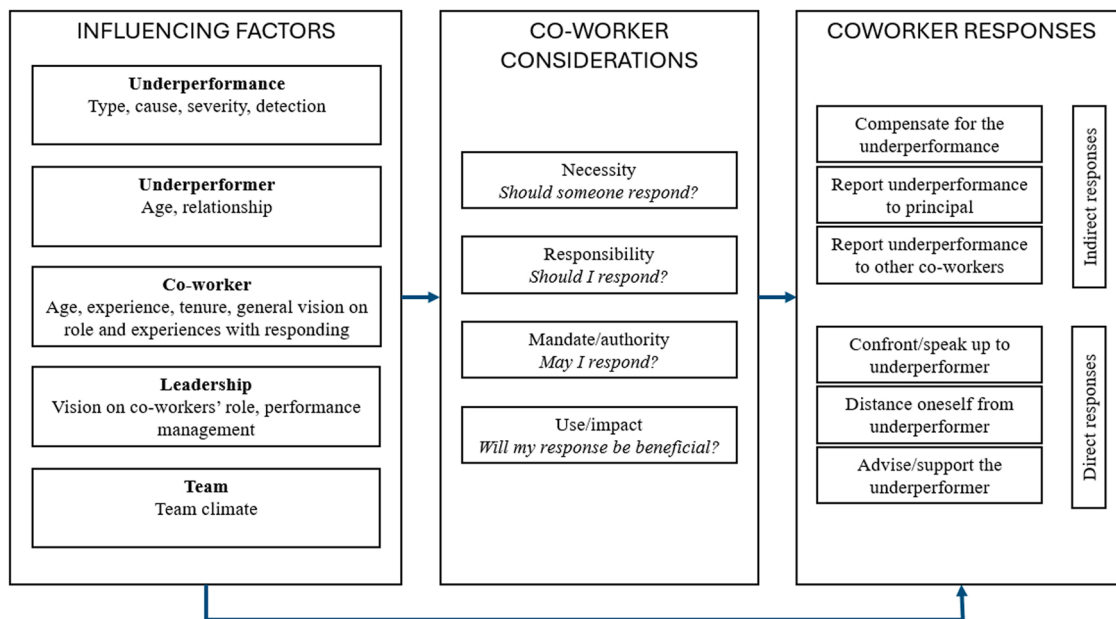
Fig. 1. Research model with possible explanations for co-workers' responses to teacher underperformance.

2019). Responding can thus be done out of a feeling of obligation towards the organisation, to 'give back' to the organisation and can be considered as a form of organisational citizenship behaviour Bowling & Lyons, 2015; Jackson & LePine, 2003; Taggar & Neubert, 2008). On the other hand, co-workers may remain silent out of prosocial considerations when they consider that it is inappropriate for them to judge or respond to the underperformance (Henriksen & Dayton, 2006; Van Den Ouweland et al., 2019; Van Dyne, Ang, & Botero, 2003). This means that co-workers may feel more or less mandated or authorised to respond. Concerning the impact or use of responding, research found that co-workers perceive the possibility of change and the expected consequences of actions and make a cost-benefit analysis before choosing a response (Bisel & Arterburn, 2012; Morrison, Wheeler-Smith & Kamdar, 2011; Struthers, Miller, Boudens & Briggs, 2001). They may fear possible negative consequences of speaking up or find it futile to respond (Knoll & van Dick, 2013; Van Dyne et al., 2003).

2.2.3. Influencing factors

The research model (Fig. 1) entails different factors that can influence how co-workers consider the necessity, use, and their responsibility and authority to respond when they perceive a team member to underperform.

The underperformance: Based on our previous qualitative study (Van Den Ouweland et al., 2019) we firstly included underperformance characteristics as potential influencing factors, i.e. the type, perceived cause and severity of the underperformance, as well as the way in which the co-worker detected or became aware of the underperformance. In that study, co-workers for example felt more authorised to judge certain aspects of teaching than others, felt more authorised to respond when the underperforming teacher admitted the underperformance and asked for help, and less authorised when they did not witness the underperformance themselves (Van Den Ouweland et al., 2019). Based on the existing literature, we also included perceived causes of the underperformance as possible influences on co-workers' responses (Jackson & LePine, 2003; Taggar & Neubert, 2008), as well as the severity of the underperformance, since it was found that co-workers' responses depend upon the seriousness and impact of the underperformance (Bowling & Lyons, 2015; Neff, 2009).

(Relationship with) the underperformer: Next to these underperformance characteristics, the age of the underperformer and the

relationship with the underperformer can also influenced responses. Van Den Ouweland et al. (2019) found that teachers considered it difficult or less useful to speak up to more experienced, older teachers. Moreover, while having a good relationship with the underperformer made it easier for some co-workers to speak up, others indicated that it made it harder because they did not want to harm the relationship. Other studies have also found that responses can depend on how well one knows the co-worker, as well as on the likableness of the underperformer (Bradfield & Aquino, 1999; Ferguson et al., 2010; Schwappach & Gehring, 2014). The nature of the relationship may also to matter: for example, teaching the same subject as the underperforming teacher could make it easier to respond to problems related to teaching content (Van Den Ouweland et al., 2019).

The co-worker: In our research model (Fig. 1), we include co-workers' age, work experience and tenure as potential influences on co-worker responses. Gruys et al. (2010) for example found that older, more experienced workers were more likely to report CWB. On the other hand, Van Den Ouweland et al. (2019) found that older teachers more often felt that they, as co-workers, had little authority to respond, and non-tenured teachers were often more insecure about speaking up. We also included previous experiences and general views on the role of co-workers in responding to underperforming teachers as possible influencing factors (Van Den Ouweland et al., 2019). Van Dyne et al. (2008) e.g. found that employees who perceived voice to be part of their jobs were rated by their supervisors as engaging in more voice behaviour than employees who perceived voice to be extra-role behaviour.

School leadership: In our research model (Fig. 1) we also included leadership factors as possible influencing factors on co-worker responses, i.e. the performance management in the school and the vision of the school leader on co-workers' role in responding to teacher underperformance. In our previous study, teachers tended to remain silent when they perceived that it was futile to respond since there was no performance management in the school and/or limited principal responses to teacher underperformance. Moreover, most teachers were willing to follow their principal's advice or views on how they should respond to the underperformance (Van Den Ouweland et al., 2019). In other studies, it was found that co-workers consider the probability that their supervisor will listen to and act upon their voicing of workplace problems, before speaking up to their supervisors (Bisel & Arterburn, 2012; Milliken et al., 2003). This is related to their relationship, the

approachability and supportiveness as well as the leadership style of the supervisor: research suggests that transformational, authentic and ethical leaders can stimulate employee voice behaviours (Morrison, 2014; Mowbray, Wilkinson, & Tse, 2015; Vakola & Bouradas, 2005).

The school team: Lastly, team factors may influence co-worker responses to teacher underperformance. In previous research, teachers reported that a collegial, open atmosphere in the team facilitated speaking up to the underperforming teacher, while others feared the consequences of speaking up because of too much gossip or 'bad apples' ruining the team's atmosphere (Van Den Ouweland et al., 2019). The tendency to speak up or to report the underperformance was also found to depend on the team's cohesion and safety, the work climate (e.g., justice vs. distrust), voice climate (e.g., collective norms of voice or silence), and the team's consensus on the performance problem (Bowen & Blackmon, 2003; Edwards, Ashkanasy, & Gardner, 2009; King & Hermodson, 2000; Morrison et al., 2011; Tangirala & Ramanujam, 2008). In our research model, we therefore added the team climate as a potential influencing factor.

2.2.4. Research model

Based on this literature overview, we built the research model depicted in Fig. 1, and set out the following research questions:

1. How are different co-workers' responses to incidents of teacher underperformance influenced by their considerations about the necessity to respond, their responsibility and authority to respond, and the use of responding?
2. How do the underperformance, underperformer, co-worker, leadership, and team characteristics in our research model influence these considerations?

3. Methodology

3.1. Research context

Our study was executed in Flanders, the Dutch speaking part of Belgium. Flemish educational policy is characterised by deregulation and decentralisation. Principals play a central role in human resources and performance management because school boards largely decentralise these responsibilities to individual schools. The government obliges schools to have job descriptions (since 2005) and performance evaluations for teachers (since 2007), but schools have the autonomy to create evaluation criteria for teachers. However, as a guideline for teacher education and schools, the government has introduced a general teacher job profile outlining teachers' roles and related competences (Aelterman, Meysman, Troch, Vanlaer & Verkens, 2008). Although official numbers are lacking, a study in secondary education found that principals considered 12 % of their teachers to underperform in one or more job domains (Plas & Vanhoof, 2016). The most common types of underperformance included student-tailored teaching and student evaluation, implementing innovations, dealing with problematic student behaviour and motivating students.

3.2. Sample

To reach a large sample of teachers, we used a survey methodology. From across all primary and secondary schools in Flanders (with at least 10 teachers in the team), a random sample of schools was selected to participate. Of the 306 schools contacted (which is 12,5 % of primary and secondary schools in Flanders) 38 schools were willing to participate. 833 teachers returned the survey. As some questionnaires had many missing data, 708 questionnaires were analysed, from 16 primary schools and 22 secondary schools. Twenty-nine per cent of respondents were male and 71 % were female. Thirty-two per cent worked in primary education and 68 % in secondary education. Participation was anonymous and voluntary, and respondents were informed about the

purpose and method of the study, as well as respondents' rights.

3.3. Survey

For this study, we built a survey with close-ended questions. In order to study co-workers' responses to teacher underperformance and related considerations and influencing factors, respondents were requested to "*think of a recent example of an underperforming co-worker, i.e. a co-worker who performed below the expectations, in one or more areas, according to your perception. The underperformance may concern task performance (working with students, team work and/or school tasks) or the behaviour of the co-worker*". This method was inspired by the Critical Incident Technique developed by Flanagan (1954), which aims to study real-life examples of respondents' own choosing, thus that are important to them (Gremler, 2004; Hughes, Williamson, & Lloyd, 2007). We chose this method to study co-workers' responses to real examples or incidents of teacher underperformance in their schools, according to their own judgment. Most existing studies use vignettes or hypothetical cases to study co-worker responses (Ferguson et al., 2010; Liden, Wayne, & Kraimer, 2001; Richardson et al., 2008), therefore studying co-workers' intentions or attitudes rather than their actual responses (Struthers et al., 2001).

Respondents who indicated that they knew a recent example of an underperforming teacher (69 % of respondents), were asked to indicate the type, causes, manner of detection and the severity of the underperformance (i.e., performance characteristics) they had in mind, by choosing out of a list of 14 types of underperformance (based on the Flemish teacher job profile and Van Den Ouweland et al., 2019), 9 possible causes of teacher underperformance and 6 types of detection (based on a previous study). Next, respondents were requested to fill in the age of the underperforming teacher as well as the nature, intensity and quality of their working relationship. Since these were quite straightforward items, it was decided to study them with one item-questions. These items and their descriptives can be found in appendix A.

Co-workers' responses to the incidents of underperformance were measured with items based on a validated peer response measure by Jackson and LePine (2003) and further adapted for our research aims by adding items on reporting the underperformance. Since existing measures were not available to study the four considerations in our research model, a new scale was developed. CFA indicated good fit indices, which can be found in appendix B, together with Cronbach's alphas of the scales and example items.

Respondents were requested to fill in their own age, work experience, work contract (tenure), and whether they taught in primary and/or secondary education. We also added questions on their past experiences and general views on their responsibility and authority to respond to underperforming co-workers, independent of the selected examples/incidents. These items were single items and can be found in appendix A. Control variables included respondents' gender, educational level and working hours.

To study leadership factors we added single item questions about their school leaders' views on co-workers' roles in dealing with underperforming teachers. These can be found in appendix A. Performance management (PM) was measured with an instrument developed and validated by Kinicki, Jacobson, Peterson, and Prussia (2013). Concerning team characteristics (team climate), we studied reflective dialogue, collective responsibility and deprivatised practice with an scale developed and validated by Wahlstrom and Louis (2008). Fit indices and alphas of these measures can be found in appendix B, together with example items.

3.4. Analysis

For the analysis, we built a path model with the four considerations as mediators between influencing factors and responses, as shown in our

research model (see Fig. 1). All responses were included in this model, instead of building a separate model for each response, as responses could be related to each other. Moreover, as the importance of each influencing factor and each consideration for each type of response still had to be examined, no clear sequence to introduce variables could be determined; hence, hierarchical data entry was not possible (Field, 2017). Consequently, we used a backward stepwise technique: we started with a complete model, with all the explaining variables, considerations and responses. Backward is preferable to the forward method because of the suppressor effects or Type II-errors with the forward method (Field, 2017). With backward deletion, all non-significant variables were removed one-by-one: in each step, the predictor with the highest p-value was removed until all p-values were less than the critical alpha (p < 0.05). The fit of the final model was: RMSEA = 0.014, CFI = 0.975, TLI = 0.971 (when incorporating the covariance between the perceived responsibility and mandate to respond).

We used MPlus software for the analysis and controlled for clustered data (teachers clustered in schools). Because of the risk of overfitting and producing Type1-errors in our backward stepwise method with numerous parameters, we performed a final correction on our results, using the Holm-Bonferroni method, which corrects for the inflation on the alpha level (Abdi, 2010; Aickin & Gensler, 1996; Holm, 1979). This correction means that we lowered the critical alpha with the Holm-Bonferroni calculation for all significant relationships found (i.e., with alpha <0.05). As a result, a number of significant relationships became non-significant and were removed.

Explained variances of the considerations were between 35 % and 46 %, and explained variances for the responses were as follows: 28 % for report to co-workers, 33 % for distance, 35 % for compensation, 41 % for report to principal, 44 % for support, and 47 % for confrontation. We also allowed for direct effects of influencing factors on responses.

4. Findings

4.1. Considerations as mediators between influencing factors and responses

We found significant effects of multiple influencing factors on the studied considerations (see Table 1), which in turn influenced the studied responses in different ways (see Fig. 2).

More specifically, we found that when teachers collaborate more intensely with the underperformer (B=0.125, p < 0.01), when they were informed about the underperformance by their principal (B=0.097, p < 0.01) and hold the vision that in general it is their responsibility and it is appropriate for co-workers to respond in case a team member underperforms (respectively B=0.393, p < 0.01 and B=0.335, p < 0.01), they more often feel **responsible** for responding to specific cases/incidents of underperformance. Therefore, they respond more by **compensating** for the underperformance (B=0.389, p < 0.01), by **reporting the underperformance** to their principal and other co-workers (respectively B=0.261, p < 0.01 and B=0.221, p < 0.01) and by **confronting or speaking up** to the underperformer (B=0.216, p < 0.01).

In cases where the underperformance concerns problems with classroom management (B=0.125, p < 0.01), the co-worker perceives the underperformance to be caused by limited psychological strength/ resilience (B=0.114, p < 0.01), the co-worker holds the vision that in general it is appropriate for co-workers to respond to underperforming teachers (B=0.341, p < 0.01), the school leader has a clear vision on co-workers' role in responding to teacher underperformance (B=0.185, p < 0.01), and when there is more deprivatised practice in the team (B=0.196, p < 0.01), co-workers feel that responding would be more **useful**. Therefore, they more often provide **support and advice** to the underperformer (B=0.366, p < 0.01), **confront/speak up** to the underperformer more (B=0.226, p < 0.01) and **distance themselves**

Table 1
Significant influences on how co-workers perceived their responsibility and mandate to respond, and the use of responding to the reported cases.

	Responsibility	Mandate/ authority	Use/ impact
Underperformance characteristics			
Type: Evaluating and monitoring students' learning and development		−.166 * *	
Type: Raising students			−.174 * *
Type: Classroom management, creating a favourable learning climate			.125 * *
Type: Inappropriate or unethical behaviour towards students			−.208 * *
Cause: Lack of (up-to-date) knowledge or skills		.125 * *	
Cause: Limited psychological strength/resilience			.114 * *
Cause: Student behaviour triggered the UP		−.116 * *	
Detection: Informed by principal	.097 * *		
Detection: Informed by parent(s)		.093 * *	
Underperformer characteristics			
Relationship: Collaboration intensity	.125 * *		
Age			−.136 * *
Co-worker characteristics			
General vision: My responsibility to take action when a co-worker underperforms	.393 * *	.226 * *	
General vision: Appropriate to respond to underperforming co-worker in my position	.335 * *	.370 * *	.341 * *
Leadership characteristics			
PM: Approachable communication style		.126 * *	
PM: Timely, specific and honest feedback to teachers			−.239 * *
Vision: Clear vision on co-workers' role			.185 * *
Team characteristics			
Team climate: reflective dialogue		.102 *	
Team climate: deprivatised practice			.196 * *
Team climate: collective responsibility		−.114 * *	

Note: * *p < 0.01, *p < 0.05.

less from the underperformer (B=−0.242, p < 0.01). On the other hand, when the underperformance entails raising students and inappropriate or unethical behaviour towards students (respectively B=−0.174, p < 0.01 and B=−0.208, p < 0.01), when the underperformer is older (B=−0.136, p < 0.01), and the school leader provides more feedback to teachers (subscale of performance management) (B=−0.239, p < 0.01), co-workers perceive that it would be less useful to respond. Therefore, they provide less support/advice (B=0.366, p < 0.01), confront the underperformer less (B=0.226, p < 0.01) but distance themselves more from the underperformer (B=−0.242, p < 0.01).

Confronting/speaking up to the underperformer is also influenced by whether co-workers feel **authorised/mandated** to respond to the underperformance (B=0.237, p < 0.01). This is more often the case when they perceive the underperformance to be caused by a lack of knowledge or skills (B=0.125, p < 0.01), when they were informed by parents about the underperformance (B=0.093, p < 0.01), when they generally feel that it is a co-worker's responsibility and it is appropriate for co-workers to respond when a team member underperforms (respectively B=0.226, p < 0.01 and B=0.370, p < 0.01), when the principal has a more approachable communication style (subscale of performance management) (B=0.126, p < 0.01) and when the team is characterised by more reflective dialogue (B=0.102, p < 0.05). On the other hand, when the underperformance concerns evaluating students and monitoring their learning and development (B=−0.166, p < 0.01),
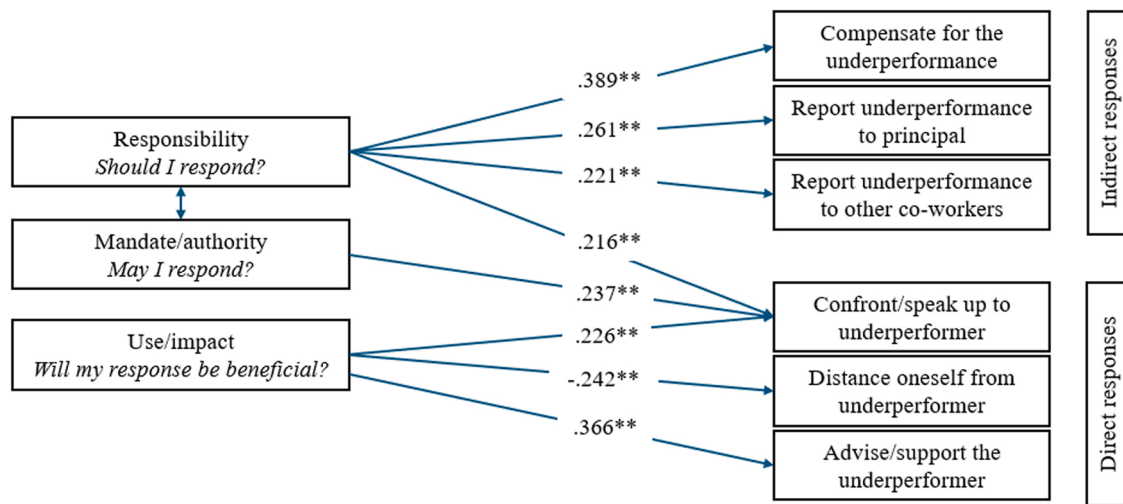
Responsibility — *Should I respond?*
- → .389** → Compensate for the underperformance
- → .261** → Report underperformance to principal
- → .221** → Report underperformance to other co-workers

Mandate/authority — *May I respond?*
- → .216**
- → .237** → Confront/speak up to underperformer

Use/impact — *Will my response be beneficial?*
- → .226** → Confront/speak up to underperformer
- → -.242** → Distance oneself from underperformer
- → .366** → Advise/support the underperformer

Indirect responses: Compensate for the underperformance; Report underperformance to principal; Report underperformance to other co-workers.

Direct responses: Confront/speak up to underperformer; Distance oneself from underperformer; Advise/support the underperformer.

Fig. 2. *:* Statistically significant influences of considerations on co-workers' responses (**=$p < 0.01$).

when they perceive the underperformance to be triggered by students' behaviour (B=−0.116, $p < 0.01$) and when the team climate is characterised by more collective responsibility (B=−0.114, $p < 0.01$), they feel less mandated to respond and therefore confront the underperformer less.

We did not find any significant effects of the perceived necessity for someone to respond to the underperformance (which was one of the four studied considerations) on co-workers' responses, nor of the perceived severity of the underperformance. In addition, co-workers' age, work experience and tenure did not show any significant effects.

Table 2
Significant direct effects of influencing factors on co-workers' responses to the reported cases.

	COM	REP	REPC	CON	DIS	SUP
Underperformance characteristics						
Type: Quality of teaching content				−.130 **		
Type: Quality of instruction/didactics		.145 **	.194 **		.194 **	−.137 **
Type: Classroom management, creating a favourable learning climate						.129 *
Type: Consulting and collaborating with colleagues					.251 **	
Type: Following up on agreements and task allocations				.109 **		
Type: Fulfilling administrative tasks	.124 **					
Type: Inappropriate or unethical behaviour towards students		.159 **				
Type: Inappropriate or unethical behaviour towards co-workers				.128 **		
Type: Intentional lack of effort		.092 *	.170 **			−.128 **
Cause: Lacking (up-to-date) knowledge or skills						.103 *
Cause: Limited psychological strength/resilience			−.169 **			.102 **
Cause: Bad character or personality			.092 *			
Cause: Private circumstances						.219 **
Cause: Student behaviour triggered the UP						.083 *
Cause: Principal or school policy		.171 **				
Detection: Informed by other co-worker(s)						−.118 **
Detection: Informed by principal		.101 **				
Detection: Informed by student(s)						.077* *
Underperformer characteristics						
Relationship: Collaboration intensity	.182 **			.113 **		.194 **
Relationship: Working in common department	.179 **	.202 **				
Relationship: Working on common school project or in common working group			.170 **			
Relationship: Meeting each other outside school/private relationship			−.170 **			
Relationship Teaching common students	.168 **					
Co-worker characteristics						
General vision: Okay for co-workers to respond to underperformer co-workers		−.148 **				
Experience with responding: Know from experience how (not) to respond to underperforming co-workers				.128 **		.093 **
Age			−.226 **			
Experience: Years of experience as teacher in the school of study			.158 *			
Tenure: non-tenured with fixed-term contract		−.116 *				
Working in primary education				−.116 **		
Leadership characteristics						
PM: Approachable communication style				−.140 **		
PM: Consequences (e.g.recognition/rewards) for teacher performance						−.098 *
Vision: teachers should report underperformance to principal		.214 **				
Vision: clear vision on co-workers' role				.210 **		.190 **
Team characteristics						
Team climate: deprivatised practice	.139 **					

Note: COM=compensation, CON=confrontation, SUP=support/advice, DIS=distance, REPC=reporting to other co-workers, REP=reporting to principal, * * $p < 0.01$, *$p < 0.05$.

4.2. Direct effects of influences on co-worker responses

Since we expected that the studied considerations would only partly mediate responses, we also studied direct effects of the influencing factors on responses. The significant effects are presented in Table 2.

We found that co-workers **compensate** more for a team member's underperformance when this underperformance concerns fulfilling administrative tasks (B=0.124, p < 0.01), when they collaborate more intensely with the underperforming teacher (B=0.182, p < 0.01), work in the same department or teach common students (B=0.179, p < 0.01 and B=0.168, p < 0.01, respectively), and when there is more deprivatised practice in the team (B=0.139, p < 0.01).

They more often **report the underperformance to their principal** when the underperformance concerns quality of instruction/didactics, inappropriate or unethical behaviour towards students or intentional lack of effort (respectively B=0.145, p < 0.01, B=0.159, p < 0.01 and B=0.092, p < 0.05), in situations where they perceive the underperformance to be caused by the principal or school policy (B=0.171, p < 0.01), when they work in the same department as the underperformer (B=0.202, p < 0.01), and when they perceive it to be the principal's vision that teachers should always report cases of underperformance to the principal (B=0.214, p < 0.01). On the other hand, when co-workers generally believe that it is not okay for co-workers to respond to teacher underperformance (B=−0.148, p < 0.01) and when they have a fixed-term contract (B=−0.116, p < 0.05), they are less likely to report the underperformance to the principal.

Our results indicate that co-workers more often **report the underperformance to other co-workers** when the underperformance concerns quality of instruction/didactics or intentional lack of effort (respectively B=0.194, p < 0.01, B=0.170, p < 0.01), when they perceive that the underperformance is caused by bad character/personality (B=0.092, p < 0.05), when they work on a common school project or in the same working group as the underperformer (B=0.170, p < 0.01) and when they have more years of working experience in the school (B=0.158, p < 0.05). On the other hand, when co-workers believe that the underperformance is caused by limited personal strength/resilience (B=−0.169, p < 0.01), when they have a private relationship with the underperformer (B=−0.170, p < 0.01) and when they are older (B=−0.226, p < 0.01), they are less likely to report the underperformance to other co-workers.

Co-workers tend to **confront the underperformer** when the underperformer does not follow up on agreements and task allocations or displays inappropriate behaviour towards co-workers (respectively B=0.109, p < 0.01, B=0.128, p < 0.01), when they collaborate more intensely with the underperformer (B=0.113, p < 0.01), perceive to know from experience how to respond to teacher underperformance (B=0.128, p < 0.01) and when their principal has a clear vision on co-workers' role in responding to teacher underperformance (B=0.210, p < 0.01). On the other hand, they are less likely to confront the underperformer when the underperformance concerns quality of teaching content (B=−0.130, p < 0.01). Teachers working in primary education (B=−0.116, p < 0.01) and teachers who feel that their principal has an approachable communication style (B=−0.140, p < 0.01) also display less confrontation.

Our results indicate that co-workers **distance themselves** more from the underperformer when the underperformance concerns quality of instruction/didactics and consulting and collaborating with colleagues (respectively B=0.194, p < 0.01, B=0.251, p < 0.01).

Finally, it was found that co-workers are more likely to provide the underperformer with **support or advice** when the underperformance concerns classroom management (B=0.129, p < 0.01), when they perceive the underperformance to be caused by a lack of knowledge or skills, limited psychological strength, private circumstances or triggered by student behaviour (respectively B=0.103, p < 0.05, B=0.102, p < 0.01, B=0.219, p < 0.01, B=0.083, p < 0.05), when they were

informed about the underperformance by students (B=0.077, p < 0.01), when they collaborate more intensely with the underperformer (B=0.194, p < 0.01), when they indicate to know from experience how to respond to teacher underperformance (B=0.093, p < 0.01) and when their principal has a clear vision on co-workers' role in responding to teacher underperformance (B=0.190, p < 0.01). On the other hand, they support/advise the underperformer less when the underperformance concerns quality of instruction/didactics (B=−0.137, p < 0.01), when they perceive the underperformance to be caused by intentional lack of effort (B=−0.128, p < 0.01), when they were informed by other co-workers about the underperformance (B=−0.118, p < 0.01) and when they feel that their principal provides consequences for teacher (under)performance (B=−0.098, p < 0.05).

5. Conclusion and discussion

Despite the importance of teamwork in education and the possible impact that co-workers can have on teacher underperformance, little is known about how and why teachers respond when they perceive a co-worker to be underperforming. In this study, we therefore aimed to identify explanations for co-worker responses to teacher underperformance so as to obtain more insight into which factors may stimulate or hinder certain responses. Based on a literature review, we built a research model which included explanations for co-worker responses and different influencing factors. Based on the found effects, we transformed our research model into an explanatory framework for co-worker responses (see Fig. 3).

5.1. Responsibility, mandate and use

In general, we found that co-worker responses are determined by different underperformance, underperformer, co-worker, leadership and team characteristics, which (partly) explain whether co-workers consider themselves to be responsible and authorised to respond to the underperformance, and/or consider that responding would be useful in that specific situation.

More specific, our findings suggest that compensation and reporting of the underperformance depend on whether co-workers feel they have the responsibility to respond. In previous research, this felt responsibility has been linked to social exchange theory (Bowling & Lyons, 2015). Providing support/advice to the underperforming teacher can be explained by the co-workers' perception that this response will be useful. In this regard, expectancy theory has been used to explain why co-workers consider the possible consequences of responding before choosing a response (Morrison, 2014; Morrison et al., 2011). For our study, this means that teachers support or advise the underperforming teacher when they perceive that this will have a beneficial effect on the underperformance, possibly because this type of response carries a certain 'cost' for the co-worker: supporting or advising the underperforming teachers demands time and effort. When co-workers feel that responding is useless, they distance themselves from the underperforming teacher. Finally, our findings indicate that speaking up to/confronting the underperforming teacher not only depends on whether co-workers feel responsible to respond and feel that responding would be useful, but also on whether co-workers feel mandated or authorised to respond. Confrontation is potentially the most 'dangerous' or 'disruptive' response of the different studied responses. Co-workers may feel that it is inappropriate to respond in their position and may remain silent out of conformity or prosocial considerations (Henriksen & Dayton, 2006; Van Dyne et al., 2003).

5.2. Influences of underperformance, underperformer and co-worker

Fig. 3 shows that the considerations of responsibility, mandate and use can, in turn, be explained by multiple factors. As expected, underperformance characteristics appear to play an important role in this: co-
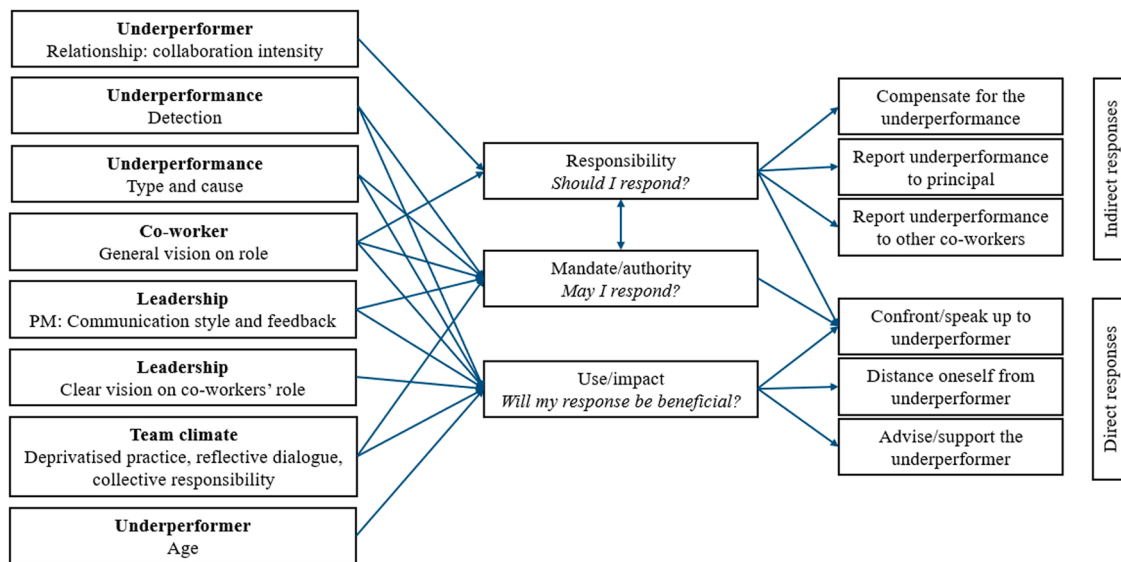
Fig. 3. Explanatory framework for co-workers' responses to teacher underperformance.

workers feel more mandated and/or feel that it would be more useful to respond to specific types (e.g., classroom management) and causes of underperformance (e.g., limited knowledge/skills), which in turn influences whether they confront or support the underperformer, or distance themselves from him/her. Surprisingly, the perceived severity of the underperformance did not impact responses in our study, contrary to findings of previous research (Bowling & Lyons, 2015; Neff, 2009). In addition, co-workers perceive that responding is more useful when the underperformer is younger. This implies that older underperforming teachers receive less advice and support, they are also confronted less often and co-workers more often distance themselves from them. Moreover, co-workers feel more mandated to respond, and therefore confront the underperformer more, when they are informed by parents. Possibly, this is because there is a general perception that it is important to take parents' complaints seriously. Next to these situational factors, co-workers' general views on teachers' roles in dealing with teacher underperformance appear to influence their considerations in specific cases and, therefore, both direct and indirect responses. This means that teachers have a certain general attitude towards the topic, which influences their responses independent of the specific situation.

5.3. Influences of school leadership and teamwork

Our findings also indicate that leadership and team factors can enable co-worker responses. Co-workers feel that responding is more useful when their principal has a clear vision on teachers' roles in dealing with underperforming co-workers. When co-workers believe that their principal wants to be informed when a team member underperforms, they will report the underperformance more. In addition, when the principal informs the co-worker about the underperformer, they feel more responsibility to respond, possibly because the principal confides in them to discuss the underperformance (Bowling & Lyons, 2015). Together, these leadership influences suggest that teachers need to feel 'backed-up' by their principals to respond. In addition, we found that teachers feel more mandated when the principal has an approachable communication style, which confirms earlier research indicating the importance of leaders' closeness and approachableness (Milliken et al., 2003; Morrison, 2014; Mowbray et al., 2015). However, while a previous study found that a lack of performance management in the school can discourage co-workers to respond themselves (Van Den Ouweland et al., 2019), we did not find evidence for this. We even found that more feedback from the principal decreased co-workers' responses because teachers felt that it would be less useful to respond. We also

found direct negative effects of PM-practices on responses. Possibly, more PM in schools can make teachers feel that it is redundant to respond to specific types (e.g., classroom management) and causes of underperformance in schools than for co-worker responses.

Team factors appear to influence how teachers perceive their mandate and the use of responding, and therefore confront, support or distance themselves from the underperformer. Co-workers feel more mandated when there is more reflective dialogue among team members. Possibly, this dialogue creates a certain psychological safety or trust among co-workers to discuss each other's performance (Edmondson, 1999; Van den Bossche, Gijselaers, Segers, & Kirschner, 2006). In addition, our findings suggest that when teachers open up their class doors to other teachers (i.e., deprivatised practices), they feel that it is more useful to respond. Possibly, in these cases, underperforming teachers feel more inclined to change because there is more visibility and, therefore, more social control among team members. We also found that collective responsibility in the team prevents teachers from distancing themselves from the underperforming teacher. At the same time, this collective responsibility decreases co-workers' perceived mandate to respond, possibly because co-workers feel partly responsible for the underperformance in these cases. As such, they may feel that it would be less appropriate to judge the underperformance, which is a form of prosocial silence (Van Dyne et al., 2003). The relationship with the underperformer also influences responses: when co-workers collaborate more intensely with the underperforming teacher, they feel more responsible to respond, which enhances confrontation, compensation and report. We also found direct positive effects of collaboration intensity on compensation, confrontation and support. Possibly, this collaboration intensity can be linked to the interdependence among team members: this can create a sense of urgency and/or more opportunities among co-workers to discuss each other's performance (Lepine & van Dyne, 2001; Van den Bossche et al., 2006).

5.4. Implications for educational policy and practice

Our findings provide some important insights for educational practice. Schools can facilitate co-worker responses to teacher underperformance, and therefore make use of the potential of co-workers to support the remediation of this underperformance. Firstly, we found that if we want teachers to confront or support an underperforming teacher, it is helpful that the school leader communicates a clear vision of co-workers' role in this, and creates a culture of deprivatised practice,

since this makes teachers feel that their response can have an impact. Moreover, if school leaders wish to discuss the subject with co-workers, it is important that they ask about how they feel about responding in a specific situation and/or more in general: why do they feel like it is their responsibility or not, and feel that it is appropriate or not to respond in their position, and does this correspond with the principal's view? How do they feel about responding to older and more experienced teachers and why do they feel that they have less impact on these co-workers? In addition, it appears that when the team climate is characterised by regular professional dialogue, co-workers will also feel more mandated to respond when someone underperforms. Finally, the school leader's openness and approachability seems to matter: teachers should be able to talk to their principal and feel that they can discuss the subject. This way, co-workers may respond and be able to impact on the underperformance more directly or indirectly, rather than tolerating it or distancing themselves from the underperformer, which can be detrimental for the school on different levels (Morrison, 2014); it may sustain or even worsen the underperformance, isolate the underperformer from the team, and deprive the underperformer of opportunities to ameliorate his or her performance.

5.5. Shortcomings and suggestions for follow-up research

While our study built an explanatory framework for co-worker responses, it was the first large scale studies in education, thus the framework needs further testing and refinement. Looking at the number of direct effects found, it appears that the perceptions of having a responsibility and mandate to respond and considerations about the use of responding only partly influence co-workers' responses. Other explanations may be identified in follow-up research. We must also emphasise that we partly based our framework on a study in which co-workers were requested to explain their responses (Van Den Ouweland et al., 2019). Therefore, our framework is based on explanations of which co-workers are aware, i.e. well-considered, rational considerations. Previous research has however shown that emotions, personality factors and more automatic, nonconscious processes also play a role in their responses (Bowling & Lyons, 2015; Edwards et al., 2009; Morrison, 2014).

Moreover, it is important to bear in mind that we based our results on co-workers' perceptions and therefore their judgment of the underperformance, which means that school leaders or other teams members might have had a different view on this. In addition, we studied responses as an individual phenomenon, but underperformance is often discussed with co-workers and shared perceptions and responses may be formed (Harvey, Madison, Martinko, Crook & Crook, 2014; Taggar & Neubert, 2004). We did not study whether co-workers' perceptions of the underperformance were influenced by the perceptions of others, nor whether their responses were influenced by other teachers' and principals' responses. Possibly, their responses influence both each other and the underperformance, which provokes new responses and so on. These emerging dynamics could not by studied with our cross-sectional research design. Concerning team variables, it might also be interesting to study responses in different subteams within the same

organisation, since Morrison et al. (2011) found that voice climate can differ across these teams. Moreover, it would be interesting to study more specific aspects of team climate in follow-up research, such as voice climate and feedback climate, and broaden the perspective of research on teacher underperformance with insights from literature on organisational learning and feedback cultures in school. The latter may not only influence co-workers' responses and related considerations, but also how feedback is received and acted upon by underperforming teachers (London & Smither, 2002). In addition, our study cannot provide evidence of the impact and the learning effect of co-worker responses on the underperformer, and on the team and school more broadly. Interestingly, we did find that teachers who indicated knowing from experience how to respond, more often used confrontation and support as responses. This might suggest that when teachers do try to respond, they have positive experiences. Therefore, it would be interesting to identify successful examples of how principals and co-workers address teacher underperformance in future studies.

Summary of findings

In sum, our study indicates that co-worker responses to teacher underperformance are dependent on whether they feel responsible and authorised to respond, and perceive that responding would be useful. Co-workers more often report and compensate for teacher underperformance when they feel that they have the responsibility to do so. Providing support/advice to the underperforming teacher depends on the co-worker's belief that this will be useful. When co-workers feel that responding would be useless, they distance themselves from the underperforming teacher. Moreover, teachers more often speak up/confront the underperforming teacher when they also feel authorised to respond. While their responses partly depend on the specific situation of the underperformance, teachers also have a certain general attitude towards the topic. In addition, they perceive that it is less useful to respond to older underperformers, and feel more responsible and mandated to respond when, respectively, the principal and parents informed them about the underperformance. Moreover, co-workers feel more responsible when they collaborate more intensely with the underperformer. In addition, the team climate can enhance the perceived mandate and use of responding. Finally, principals can also influence the perceived responsibility and mandate to respond, and the perceived use of responding: by creating a clear vision in schools on co-workers' roles in responding to underperformers and by being open and approachable.

CRediT authorship contribution statement

Appendix A: Descriptive statistics

Description	Min	Max	M	SD
Co-workers' responses				
Compensate for the underperformance (scale)	1	5	3,39	1,17
Report underperformance to principal (scale)	1	5	3,18	1,49
Report underperformance to other co-workers (scale)	1	5	3,62	1,02
Confront/speak up to the underperformer (scale)	1	5	2,57	1,24
Advise/support the underperformer (scale)	1	5	2,57	1,04
Distance oneself from the underperformer (scale)	1	5	3,01	1,18

(*continued*)

	Description	Min	Max	M	SD
Co-workers' considerations					
	Necessity for someone to respond (scale)	1	5	4,37	0,67
	My task/Responsibility to respond (scale)	1	5	3,26	1,01
	Mandate/authority to respond (scale)	1	5	2,82	1,12
	Use/impact of responding (scale)	1	5	2,50	0,91
Underperformance characteristics (single items)					
Type	Quality of teaching content	1	5	3,73	1,22
	Quality of instruction/didactics	1	5	3,81	1,20
	Evaluating and monitoring students' learning and development	1	5	3,81	1,17
	Raising students	1	5	3,66	1,20
	Handling diversity in the classroom/differentiation	1	5	3,59	1,21
	Classroom management, creating a favourable learning climate	1	5	3,74	1,21
	Consulting and collaborating with colleagues	1	5	4,09	1,03
	Following up on agreements and task allocations	1	5	3,92	1,20
	Contributing to working groups, projects or other school tasks	1	5	4,08	1,14
	Fulfilling administrative tasks	1	5	3,76	1,24
	Cooperation with parents or others	1	5	3,38	1,19
	Inappropriate or unethical behaviour towards students	1	5	2,63	1,37
	Inappropriate or unethical behaviour towards co-workers	1	5	2,74	1,47
	Intentionally breaking rules or arrangements	1	5	3,04	1,36
	Intentional lack of effort	1	5	4,00	1,14
	Illegitimate absences	1	5	2,38	1,43
Cause	Lack of (up-to-date) knowledge or skills	1	5	3,14	1,39
	Demotivation	1	5	3,72	1,19
	Faulty vision on education or the teacher's job	1	5	3,48	1,17
	Limited psychological strength/resilience	1	5	3,21	1,31
	Bad character or personality	1	5	4,27	0,82
	Private circumstances	1	5	2,78	1,39
	Student behaviour triggered the UP	1	5	1,73	0,95
	Task allocation	1	5	2,08	1,18
	Principal or school policy	1	5	2,63	1,32
Severity	Severity of the underperformance	2	5	3,94	0,76
Detection	Self-observed	0	1	0,92	0,28
	Informed by underperformer	0	1	0,11	0,31
	Informed by other co-worker(s)	0	1	0,55	0,50
	Informed by principal	0	1	0,12	0,32
	Informed by student(s)	0	1	0,42	0,49
	Informed by parent(s)	0	1	0,22	0,42
Underperformer and relationship characteristics (single items)					
Age	Age of the underperformer	22	62	44,31	9,63
Relationship	Collaboration intensity	1	5	2,47	1,29
	Collaboration quality	1	5	2,74	1,19
	Working in common department	1	5	3,30	1,74
	Working on common school project or in common working group	1	5	3,46	1,53
	Meeting each other outside school/private relationship	1	5	1,66	1,17
	Teaching common students	1	5	3,38	1,62
Co-worker characteristics (single items)					
Educational level	Working in primary education	0	1	0,32	0,47
Age	Age	22	73	41,62	10,35
Experience	Years of experience as teacher	0	54	16,59	10,31
	Years of experience as teacher in the school of study	0	54	13,91	9,86
Tenure	Non-tenured with fixed-term contract	0	1	0,13	0,34
	Non-tenured with permanent contract	0	1	0,09	0,29
	Tenured	0	1	0,78	0,42
Work regime	Working less than 50%	0	1	0,03	0,18
	Working 50 −90%	0	1	0,25	0,43
	Working more than 90%	0	1	0,72	0,45
General vision on co-workers' role	My responsibility to take action when a co-worker underperforms	1	5	3,04	1,07
	Appropriate to respond to underperforming co-worker in my position	1	5	2,78	1,18
	Okay for teachers to respond to underperforming co-workers	1	5	3,77	0,98
	Feel comfortable to respond to underperforming co-workers	1	5	1,96	1,01
	In my nature/personality to respond to underperforming co-workers	1	5	2,67	1,22
Experiences with responding	Previous positive experiences with responding to underperforming co-workers	1	5	2,91	1,28
	Know from experience how (not) to respond to underperforming co-workers	1	5	3,06	1,17
Leadership characteristics					
Vision on co-workers' role	It is a teacher's job to respond to underperforming co-workers (single item)	1	5	3,29	1,08
	Teachers should report underperformance to principal (single item)	1	5	3,19	1,18
	Principal has a clear vision on co-workers' role in responding to underperformance (single item)	1	5	2,78	1,20
Performance	Providing timely, specific and honest feedback to teachers (scale)	1	5	3,35	0,93
management	Assisting teachers in setting performance goals (scale)	1	5	3,25	0,97
	Coaching teachers (scale)	1	5	3,33	0,93
	Having an approachable communication style (scale)	1	5	3,88	0,98
	Providing consequences (e.g., recognition /rewards) for teacher performance (scale)	1	5	3,08	1,05
	Establishing/monitoring performance expectations (scale)	1	5	3,53	0,91
Team characteristics					
Team climate	Reflective dialogue (scale)	1	5	4,33	0,62

(*continued*)

Description	Min	Max	M	SD
Deprivatised practice (scale)	1	5	2,65	1,11
Collective responsibility (scale)	1	5	3,86	0,78

Appendix B. : Overview of scales

Measures	Scale + Example items	Cronbach's Alpha	Fit Indices
Co-workers' responses (6 scales measured with 3 −4 items on 5-point Likert scale)	Compensate for the underperformance: *I took over one or more responsibilities of my colleague.* Report underperformance to principal: *I asked my principal to take action.* Report underperformance to co-workers: *I told other colleagues about the underperformance* Confront/speak up to underperformer: *I talked to my colleague about the underperformance.* Advise/support the underperformer: *I emotionally supported my colleague (during the time of the underperformance).* Distance oneself from underperformer: *I distanced myself from my colleague (during the time of the underperformance).*	Compensation 0.83 Report to principal 0.94 Report to other co-workers 0.76 Confrontation 0.9 Advise/support 0.78 Distance 0.88	RMSEA = 0.041 CFI = 0.967 TLI = 0.961
Co-workers' considerations about responding (4 scales measured with 3 items on 5-point Likert scale)	Necessity to respond: *I thought that someone needed to respond to the underperformance.* Responsibility to respond: *I found it my responsibility to respond to the underperformance.* Mandate/authority to respond: *I thought that I had the right to take action.* Use/impact of response: *I thought that my response would positively impact the underperformance.*	Necessity 0.7 Responsibility 0.78 Mandate/authority 0.83 Use/impact 0.72	RMSEA = 0.043 CFI = 0.974 TLI = 0.964
Leadership characteristics: performance management (6 scales measured by 3 −5 items on 5-point Likert scale)	Feedback: *My principal gives honest feedback.* Goals: *My principal assists teachers in setting specific, measurable performance goals.* Coaching: *My principal shows teachers how to complete difficult assignments and tasks.* Communication: *My principal is approachable and available to talk to.* Consequences: *My principal rewards good performance.* Expectations: *My principal communicates expectations relating to quality.*	Feedback 0.90 Goals 0.89 Coaching 0.90 Communication: 0.82 Consequences 0.87 Expectations 0.87	RMSEA = 0.040 CFI = 0.970 TLI = 0.967
Team characteristics: team climate (3 scales measured with 3 −4 items on 5-point Likert scale)	Reflective dialogue: *I have conversations about class management with my colleagues.* Deprivatised practice: *I visit other classrooms to observe my colleagues' teaching.* Collective responsibility: *In this school, teachers take on responsibilities for the entire school, and not only for their classes.*	Reflective dialogue 0.81 Deprivatised practice 0.78 Collective responsibility 0.74	RMSEA = 0.038 CFI = 0.978 TLI = 0.961

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