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Importance of System and Leadership in Performance Appraisal¹

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Abstract

Purpose: Performance appraisal is used internationally to improve employee performance, also in the educational field. However, doubts exist about the effectiveness of performance appraisal. This study wants to contribute by expanding the knowledge about important context variables of performance appraisal in secondary education. In particular, the study examines the role of both characteristics of the teacher performance appraisal system and the school leader for procedural justice and perceived feedback utility by teachers. **Methodology:** Both interviews with school leaders and a questionnaire for teachers were used to collect our data in 32 schools. Path analyses (n=298) were used to test our research model. **Findings:** The results indicate that teacher participation in the teacher performance appraisal system significantly influences the perceived procedural justice by teachers which in its turn significantly influences the perceived feedback utility. The role of the school leaders is found to be extremely important. Charismatic leadership influences both directly and indirectly (through procedural justice) the perceived feedback utility by teachers. **Originality:** Our study contributes to the research field of (teacher) performance appraisal by studying empirically appraisal system characteristics and leadership characteristics that effect appraisal reactions. In this regard, this study responds to the need for more empirical research to uncover the social context of performance appraisal, especially in the field of education where there is a general skepticism towards teacher appraisal and its possible positive outcomes.

Keywords: performance appraisal, feedback utility, procedural justice, charismatic leadership, secondary education

Type of article: research paper

Importance of System and Leadership in Performance Appraisal

Introduction

Performance appraisal is acknowledged as one of the most important human resource practices (Judge and Ferris, 1993). Even in public sector human resource management (HRM), performance appraisal is recognized as a feature of ‘new managerialism’ (Johnson and Shields, 2007). Truss (2008) reports a renewed attention to HRM in public administration to enhance the selection and retention of good personnel. This trend is also noticeable in the educational field where reforms often display a focus on accountability (Fink 2003). Following this approach, many governments took the initiative to implement teacher performance appraisal in education (Timperley and Robinson 1997). Fletcher (2001) defines performance appraisal as ‘a variety of activities through which organizations seek to assess employees and develop their competence, enhance performance and distribute rewards’ (p.473). This developmental approach to performance appraisal has gained influence, also in the educational field. However, doubts about the practical usefulness of performance appraisal exist (Frase and Streshly, 1994). Overall, in the HRM field, there has been an ongoing debate about the effects of HRM practices on performance, the so called “opening the black box” – debate (Farndale, Hope-Hailey & Kelliher, 2011). In this debate, performance is often filled in as organizational or corporate performance (e.g. Guest, Michie, Conway & Sheehan, 2003). However, Wright and Nishii (2007) explain that

in order to increase organizational outcomes, individuals' reactions must coincide with one another to achieve a positive outcome at the organizational level.

When we apply this reasoning in the educational context on teacher performance appraisal with a clear developmental focus, we notice several context specific difficulties for the implementation and use of teacher performance appraisal. Hyslop-Marginson and Sears (2010) describe these specific characteristics of the teaching profession. First, the teaching profession is characterized by professional autonomy which should enhance teacher responsibility by identifying them as the primary authors of their own success or failure. Hence, teachers should be accountable in the same manner as other professionals. However, such accountability should be accomplished by a professional community and not by external pressure. Second, teaching is characterized by 'a complexity that is difficult to understand for those not directly involved in the profession' (p.7). Current accountability measures might ignore these specific characteristics of the teaching profession.

In this regard, Frase and Streshly (1994) argue that teacher performance appraisal in many cases is perfunctory and provides too little meaningful feedback for teachers to improve their teaching practice. However, before entirely giving up on teacher performance appraisal, more empirical research is needed to clarify the outcomes of performance appraisal practices, especially in the educational field, where HRM practices only recently gained influence. Hence, it is important to analyze if the involvement of the local professional community (both teachers and principals) can influence their perception about teacher performance appraisal.

More research is needed to identify those characteristics of teacher performance appraisal systems that are important to improve the teaching practice. Moreover, teacher performance appraisal research should take into consideration context variables (e.g. leadership variables)

because these variables may influence teacher reactions to their performance appraisal (Nathan, Mohrman and Milliman, 1991; Levy and Williams, 2004).

In this study, we will analyse performance appraisal system characteristics and school leadership in the context of the new educational policy of teacher performance appraisal issued by the Flemish government (Belgium) in 2007. Traditionally, teacher performance appraisal was not exercised on a regular basis in Flemish secondary schools. The new policy obliges secondary schools in Flanders to evaluate all their teachers every four years, starting in September 2007. The teacher performance appraisal process starts with the appointment of two evaluators, superior in rank to the teacher. Next, a job description for the individual teacher is developed. This job description contains clear standards for the work of the teacher. The further appraisal process focuses on coaching and professional growth of the teacher during at least two appraisal conferences (one formative and one summative). At the end of this process an evaluation report is handed to the teacher (Department of Education, 2007).

Theoretical Framework

The theoretical framework that guided this study is shown in Figure 1. Our research wants to contribute to the field by studying the effects of several teacher performance appraisal system characteristics and leadership on the perceived procedural justice of the teacher performance appraisal system and on the perceived feedback utility by teachers which is an important premise for teacher action in response to the feedback (Ilgen, Fisher and Taylor, 1979). By studying these relationships, we want to assess whether teacher performance appraisal has the potential to reach its main goal, the actual improvement of teacher performance and hence, student learning.

<Insert Figure 1 here>

Effective teacher performance appraisal

Teacher performance appraisal has received renewed attention as a mean to improve schools (Stronge and Tucker, 2003). However, several authors (e.g. Danielson and McGreal, 2000; Frase and Streshly, 1994; Heneman and Milanowski, 2003) notice the practice of teacher performance appraisal often is nothing more than a perfunctory exercise which takes a lot of time from school leaders and teachers. Hence, a turn-around for teacher performance appraisal is needed. Alternative ways to evaluate teachers have emerged (Heneman and Milanowski, 2003). One of these alternatives is identified as standards-based teacher performance appraisal. This approach to teacher performance appraisal has been growing in use. An effective standards-based teacher performance appraisal system should contain three essential aspects (Danielson and McGreal, 2000): 1. A comprehensive definition of teaching with standards for acceptable performance, 2. Good procedures to collect information about and assess the teaching practice, 3. Trained evaluators. Danielson and McGreal (2000) link these aspects directly to the requirements for good quality assurance in education: the “what” (i.e. a clear and coherent definition of good teaching), the “how” (i.e. the ability of teachers to demonstrate their performance on the criteria) and the quality of judgement (i.e. accurate, consistent, and evidence-based). These characteristics are put forward by several other authors as extremely important for qualitative teacher performance appraisal (e.g. Beerens, 2000; Peterson & Peterson, 2006; Stronge & Tucker, 2003; Nolan & Hoover, 2008). Moreover, several authors (e.g. Danielson and McGreal, 2000; Peterson and Peterson, 2006) emphasize the importance of the involvement of all stakeholders (i.e. school leaders, teachers, etc.) in setting up a teacher performance appraisal system because this increases the credibility of the system. The new teacher performance appraisal policy in Flanders prescribes schools to take into account these four characteristics. First, Flemish schools have to develop a job description with clear standards. Second, a budget for evaluator training is foreseen by the policy. Third, the decree prescribes that the appraisal system should be objective and

thorough. Fourth, teacher participation is a matter of course, since the policy prescribes that the teacher performance appraisal system should be negotiated in official bodies where teachers are represented. Hence, a minimum of teacher participation is assured. However, although the four characteristics of effective standards-based teacher performance appraisal are present in the decree, the schools have a lot of autonomy to work out a particular appraisal system for their own school. Therefore, the actual elaboration of these four characteristics might differ from school to school.

In the following paragraphs, we will discuss the four essential characteristics for effective teacher performance appraisal according to the standards-based teacher performance appraisal theory more detailed.

Clear standards for teaching.

Teaching is a complex endeavor and this should be acknowledged in teacher performance appraisal. Beerens (2000) states: “What one person values may not be valued by another, and debates about what is more important can ensue. Both teacher and administrator judgments may be arbitrary or idiosyncratic.” (p.59). In this regard, well-defined standards for teaching are needed to prevent arbitrary judgments. Often used for this purpose is the Framework for Teaching from Charlotte Danielson (1996). This framework clusters the aspects of teaching proven to effectively stimulate student learning into 4 domains (planning and preparation, the classroom environment, instruction, and professional responsibilities) with 22 components in total. Many school districts have used this framework to organize and define their standards for teacher performance appraisal (Danielson and McGreal, 2000). However, when defining effective teaching, it is important to take into account several issues. First, the definition of effective teaching should be based on recent best knowledge about learning and curriculum (Danielson and McGreal, 2000). Secondly, standards should be accepted by teachers. Therefore, it is important to

involve teachers in the discussion about standards and give individual teachers the opportunity to customize standards to their own practice in their personal job description (Peterson and Peterson, 2006). Thirdly, the amount of standards is important. The list should be detailed so the interaction about the teaching practice can be specific, but yet not too long to prevent that stakeholders cannot keep it in mind (Danielson and McGreal, 2000; Stronge and Tucker, 2003). Finally, it is important to define what is meant with standards. Raths (1999) makes a distinction between content standards, also called criteria, and performance standards. The former are the variables that are important in evaluating teaching, while the latter explain the amount of each criterion that is needed for a minimum achievement. Both should be addressed in standards for teaching that can serve for teacher performance appraisal.

Information sources.

A second consequence of the complexity of teaching is the need of multiple data sources for formative and summative teacher performance appraisal in order to be able to capture this complexity. Many authors (e.g. Peterson and Peterson, 2006; Stronge and Tucker, 2003, Danielson and McGreal, 2000) argue for the use of several data sources and even for the use of different combinations of data source per individual teacher. Peterson and Peterson (2006) give a good overview of what objective data use means. They argue for primary data, longitudinal collected through a well designed and fairly conducted system. Examples of good information sources are systemic collections of client surveys, peer review of materials, documentation of professional activity, etc.

Trained evaluators.

School leaders are ultimately responsible for the teacher performance appraisal that takes place in their schools. Often they are the sole evaluators of teachers. Colby, Bradshaw and Joyner (2002) argue that school leaders carry a great responsibility in the design of teacher performance

appraisal processes and should make sure that these are aligned with improving teaching. Furthermore, school leaders are also responsible for the way these processes are used in interaction with teachers (Halverson, Kelly and Kimbal, 2004). Danielson and McGreal (2000) insist on adequate training for school leaders to be able to fulfill this responsibility. This training should be threefold: training on the ability to recognize examples of the criteria, training on the ability to interpret the evidence and training on judging based on the interpretation. Stronge and Tucker (2003) place this training in the broader light of public communication about teacher performance appraisal. They argue for public disclosure in teacher performance appraisal which stimulates the understanding of appraisal criteria and procedures by all stakeholders. In our study, we will follow this broader approach and focus on the communication process in the school about teacher performance appraisal as a characteristic of a good teacher performance appraisal system. This broader view is useful since positive communication stimulates teachers' readiness and acceptance of teacher performance appraisal. A school leader must gain knowledge and ability to perform teacher performance appraisal through training. However, if he/she is not able to communicate effectively about teacher performance appraisal (goals, processes, etc.), teachers will lack trust to engage in teacher performance appraisal (Nolan and Hoover, 2008).

Teacher participation.

As argued above, it is very important for teachers to be informed about the teacher performance appraisal system. However, a more active role for the teacher is argued for by several authors (e.g. Peterson and Peterson, 2006; Danielson and McGreal, 2000; Stronge and Tucker, 2003): teachers should be involved both in the development of the teacher performance appraisal system as in the enactment of the teacher performance appraisal system. This involvement stimulates trust in the appraisal process, develops a sense of ownership (Stronge and Tucker, 2003). Roberts (2003) even argues participation is essential for a fair appraisal system.

Moreover, participation will stimulate teachers to increase the time and effort they put in the appraisal process (Peterson and Peterson, 2006). Consequently, taken into account the premise that teachers learn from what they do, teacher participation in teacher performance appraisal can actually stimulate the learning of teachers (Danielson and McGreal, 2000). In this regard, Levy and Williams (2004) suggest more research is needed to specify the effects of participation in the performance appraisal process. Also, Cawley, Keeping and Levy (1998) argue for more research regarding participation in performance appraisal focusing on different types of participation. In their review study, they demonstrated the positive effects of participation during the appraisal process itself (e.g. employee input during the appraisal interview; using employee self-assessment). However, participation can also occur in other stages of the appraisal process (Anderson, 1993). In our study, we will focus on the amount of teacher participation during the implementation process of the appraisal system.

The role of procedural justice in teacher performance appraisal

Stronge and Tucker (2003) discuss the design and implementation problems of a new teacher performance appraisal system. They identify the concern for justice as one of the main discussion points among the stakeholders. Also, in the human resource literature, research has shown that justice perceptions affect employees' behavior in the organization (Masterson, Lewis, Goldman and Taylor, 2000). Erdogan (2002) states that the justice of performance appraisals is important for the perceived effectiveness and usefulness of these performance appraisals for the users in an organization. Also, Haar and Spell (2009) note that justice perceptions may predict reactions to performance appraisals.

Traditionally, two types of justice, distributive and procedural justice, were described (e.g. Greenberg, 1990). More recently, a third type of justice, interactional justice, has been introduced (Erdogan, 2002; Narcisse and Harcourt, 2008). Distributive justice refers to the justice of the

outcomes of a decision process, while procedural justice relates to the justice of the process itself (Greenberg, 1990). Interactional justice encompasses the quality of interpersonal treatment an employee receives of his/her supervisor during a procedure as performance appraisal. However, there is some disagreement about whether interactional justice should be seen as a component of procedural justice or not (Jawahar, 2007).

In our research, we focus on procedural justice because several authors have demonstrated the importance of procedural justice for performance appraisal (e.g. Erdogan, 2002; Nurse, 2005). Nurse (2005) argues procedural justice might be an important premise for distributive justice. The use of procedural fair practices influences outcomes such as employees' satisfaction of the system and trust in the system (Jawahar, 2007; Pillai, Schriesheim, and Williams, 1999). Moreover, van den Bos, Wilke, and Lind (1998) state that if supervisors use fair procedures to make decisions, employees will be more willing to accept these decisions and perceive the outcomes of these decisions as more positive.

Moreover, our choice for procedural justice is influenced by the educational context in which our study takes place since performance appraisal in education does not lead to specific extrinsic rewards (e.g. pay raise, bonus, etc.) other than receiving qualitative feedback. In this regard, the distributive justice measure that focuses more on outcome satisfaction is less applicable in school settings. Also, due to the professional autonomy of teachers and the complexity of their job, the supervision of teachers is a difficult task. This makes teachers more sensitive for fair and valid procedures to enact this supervision.

Several authors state that a qualitative teacher performance appraisal system contributes to the objectivity and the justice of the system as perceived by teachers (Danielson and McGreal, 2000; Peterson and Peterson, 2003; Strong and Tucker, 2003). Hence, our first hypothesis is presented as follows:

H1. Clear evaluation standards (a), multiple information sources (b), good communication (c), and teacher participation (d) are associated with teachers' perceived procedural justice of the performance appraisal system.

Teacher reactions to teacher performance appraisal

Teacher performance appraisal systems have been implemented in many countries to improve the quality of instruction and thereby impact student learning (Timperley and Robinson, 1997). However, many authors (e.g. Colby *et al.*, 2002; Davis, Ellet and Annunziata, 2002) express their doubts on whether teacher performance appraisal systems are able to reach this goal. One of the problems is the lack of meaningful feedback provided by teacher performance appraisal (Frase and Streshly; 1994). Consequently, according to the theory of Ilgen *et al.* (1979), if teachers do not identify the feedback they receive as meaningful, they will not actually respond to the feedback by changing their teaching practice. Also, empirical research shows that feedback will only lead to development and improvement of employees when they perceive the feedback as useful (Kinicki, Prussia, Wu, and McKee-Ryan, 2004). Hence, feedback reactions of employees can determine the success and effectiveness of their appraisal process (Cawley *et al.*, 1998) and they are crucial for the acceptance and use of an appraisal system (Keeping and Levy, 2000). In our study, we focus on feedback utility as a dependent variable. The above mentioned theory indicates the lack of feedback utility has been identified by many authors as one of the main problems in teacher performance appraisal (e.g. Frase and Streshly; 1994). However, empirical research to confirm this is scarce. Moreover, the measurement of perceived utility has proven to be consistent and unconfounded in comparison with other reaction measures (Keeping and Levy, 2000).

Concerning feedback utility, we hypothesize the following:

H2a. The better teachers' perceptions of procedural justice, the more positive their perceptions of feedback utility.

H2b. Perceived procedural justice will mediate the relationship between the characteristics of the teacher performance appraisal system and teachers' perceived feedback utility.

The importance of the school leader in teacher performance appraisal

In their literature review on teacher performance appraisal, Colby *et al.* (2002) conclude that school leaders play a strong role in teacher performance appraisal. One of the important leadership characteristics is the credibility of the school leader. Leaders who are able to inspire trust, enhance the effectiveness of teacher performance appraisal. Also, Davis *et al.* (2002) argue that the impact of relationships between leaders and teachers can not be underestimated: the caring for others by the school leader is key to motivate teachers. This is in line with research in the field of general performance appraisals which emphasizes the importance of the relationship between supervisor and employee for performance appraisals (Nathan *et al.*, 1991). In this regard, leadership research has shifted its focus from more traditional leadership models (e.g. transactional leadership) to new theories that have leadership 'charisma' as their central focus (Pillai *et al.*, 1999). Charismatic leadership is an important factor of transformational leadership. Often transformational leadership is used as a global construct which contains components of inspirational and intellectual stimulation and individual consideration. Transformational leadership is believed to effect employee's attitudes and their work performance more than transactional leadership (Vigoda-Gadot, 2007). Avolio, Bass, and Jung (1999) recommend to distinguish in research between the different components of transformational leadership. Therefore, we put forward the charismatic leadership model in our research because this type of leadership places more emphasis on the relationship with the employee (Dirks and Ferrin, 2002).

Charismatic leadership encompasses the extent to which leaders are an example for employees and inspire them (Nguni, Slegers, and Denessen, 2006). Research has proven the merit of charismatic leadership to improve the performance of individuals (Shea and Howell, 1999). Also, Runhaar, Sanders and Yang (2010) found that teachers are more likely to ask feedback when they perceive their leaders as charismatic. However, the processes (e.g. teacher performance appraisal) by which charismatic leaders influence those around them are mainly unexplored (Erez, Misangyi, Johnson, LePine, and Halverson, 2008).

The relationship between charismatic leadership and feedback utility is hypothesized to be partial indirect and partial direct based on several research studies that demonstrated both charismatic leadership and procedural justice may individually affect feedback reactions. However, Pillai *et al.* (1999) argue the relationship between leadership and justice perceptions has been mainly left unexamined. In their research, these authors study leadership variables as antecedents of justice perceptions. They argue that transformational leaders stimulate empowerment which influences employees' perceptions of procedural justice. This makes us argue that:

H3a. The more teachers' perceive their evaluator as a charismatic leader, the better they will perceive the feedback utility.

H3b. The relationship between charismatic leadership and feedback utility will be partially mediated through procedural justice.

As a control variable, we include job experience in the research model. Peterson & Peterson (2006) claim that performance appraisal is more beneficial for beginning teachers than for (successful) veteran teachers. Also, Maurer (2001) argues that older workers may perceive participating in developmental activities less beneficial than younger workers. In this regard, we hypothesize that:

H4. More experienced teachers will perceive the feedback as less useful.

Methods

Sample

This research took place in 32 secondary schools in Flandres (Belgium). We stratified our sample for region and educational network. In total, 8 public schools, 5 subsidized public schools, and 19 subsidized private schools participated in our research. This division mirrors the proportion of each educational network in the population. In each school, we interviewed the school leader about the teacher performance appraisal system which was implemented in the school and about his/her general view points on teacher performance appraisal. Also, teachers in each school received a questionnaire about their experiences with their school leader as a supervisor and about their perceptions on the procedural justice of the teacher performance appraisal system and the feedback they received. We specifically asked school leaders to only hand out the questionnaire to teachers who recently had an appraisal conference with their supervisor. In most schools, all teachers in the school who did receive an appraisal conference with their supervisor in the past, received a questionnaire. Hence, in a majority of schools our sample equaled our population. In total, we received 414 completed questionnaires. For this research, we withheld those questionnaires from teachers who declared to actually have had an appraisal conference in the near past. Hence, 94 teachers (those who did not have an appraisal conference with their evaluator) were removed from the dataset. Moreover, 22 teachers in the remaining dataset did not fill out their job experience. These missing data may be due to a fear of teachers to be identified when giving this information (some teachers explicitly mention this as the reason on the questionnaire). However, an ANOVA-analysis showed there was no significant difference between the group of teachers who filled out job experience and the group of teachers who didn't fill out this item for the other variables used in our study. Hence, we deleted these 22

cases from the study. For the other variables, there were very few missing data. Only 2 cases showed missing data for the feedback utility variable. We used the expectation-maximization method in SPSS to estimate these missings since the missing data was limited and at random. In total, 298 questionnaires were used. These 298 teachers were evaluated by 53 evaluators in 32 schools. Hence, teachers can be grouped by evaluator and can be grouped by school. This nested design of our sample will be taken into consideration in our analyses. Our teacher sample consisted of 31% of male respondents and 69% of female respondents. The average job experience of these teachers is 14.7 years, varying from 0 to 41 years. 82% of the respondents are teachers who have tenure.

Measures

The data collection process took place in two stages. On the one hand, we used teacher survey's and on the other hand, we collected data through school leader interviews.

Teacher survey.

We administered our questionnaire to teachers including a cover letter which explained several teacher performance appraisal related terms (e.g. job description) to encourage a general understanding of these terms. Also, we clearly explained that when we referred to leadership, the leadership of the teachers' particular supervisor was meant. Hence, the leadership variable and the dependent variables were measured with a single source's self-report. We believe this self-report method for these variables is justified in this study since we explicitly want to measure the individual perceptions of a teacher concerning his/her individual teacher performance appraisal process experience with his/her own evaluator. To restrict common method bias and to ensure construct validity, we used existing, validated scales. For charismatic leadership, we used part of the Multifactor Leadership Questionnaire (MLQ-1) as described by Bycio, Hackett, and Allen (1995). The items were adjusted to measure the perception about the charismatic leadership of the

employee's supervisor. An exemplary item is 'My supervisor inspires loyalty to the organization'. Procedural justice was measured using a scale of Colquitt (2001). We specified the items of this scale so they would measure the procedural justice experienced during performance appraisal procedures. One of the items is 'The procedures of the teacher performance appraisal system have been free of bias'. For the dependent variable, feedback utility, we used a scale of Heneman and Milanowski (2003). This scale was also amended so it would measure the perceived utility of the feedback teachers received. An exemplary item is 'The feedback I received from my supervisor helped me to develop as a professional'. All items were scored by teachers on a range from 1 (strongly disagree) to 5 (strongly agree).

Because the job experience of a teacher may be associated with our dependent variable, we included this variable in our study. Job experience was measured in years.

Moreover, to ensure construct validity of our scales, we also conducted a factor analysis with all items of all our research variables. Since we used existing scales only, we opted for a confirmatory factor analysis. The confirmatory factor analysis ($n=414$) showed a moderate fit ($\chi^2 = 918.652$ ($df = 296$, $p < .000$) CFI = .901, TLI=.892, SRMR=.0485 and RMSEA = .071). Modification indices showed that several items correlated highly with each other. The content of some of these items was also less relevant for the Flemish context. Therefore, we dropped three items. Two items from the charismatic leadership scale were deleted. These items refer to less observable characteristics of the leader (e.g. his/her special gift and sense of overall purpose). We might assume that these items were too abstract for Flemish teachers. One item from the procedural justice scale was deleted. This item refers to the influence on the outcome of the appraisal procedure. However, in the Flemish context the only outcome was qualitative feedback. This item might have confused Flemish teachers. Hence, we conducted a second confirmatory factor analysis ($n=414$). This resulted in a better fit ($\chi^2 = 617.359$ ($df = 227$, $p < .000$), CFI =

.930, TLI = .922, SRMR=.0435 and RMSEA = .065). Next, we conducted a confirmatory factor analysis allowing all items to load on one factor. This led to a poor model fit ($\chi^2 = 1657.348$ ($df = 299$, $p < .000$), CFI = .785, TLI = .766, SRMR=.0743 and RMSEA = .105). These results support the discriminant validity of our measures. Next, we conducted reliability analyses for our scales which showed good Cronbach's alpha values: .87 for the feedback utility scale, .80 for procedural justice and .94 for charismatic leadership.

School leader interview.

In order to avoid a completely single source method study, the four characteristics of the teacher performance appraisal system were based on interviews conducted with school leaders about the characteristics of the teacher performance appraisal system they use in their schools. Schools dispose of the autonomy to develop and implement their own teacher performance appraisal system. Moreover, the teacher performance appraisal system is intended to be used objectively for all teachers in one school and consequently, school leaders use a broadly equal teacher performance appraisal system for all their teachers. Hence, we believe the school leader is best placed to objectively explain the characteristics of the teacher performance appraisal system put in place in his/her school. In this regard, semi-structured interviews were conducted with each school leader to get a grip on the specific characteristics of the performance appraisal system which is used in his/her school. We chose to have a qualitative data collection for these characteristics to be able to capture the richness of the choices school leaders made concerning the teacher performance appraisal system while a quantitative data collection would limit us in the questions and explanation we could ask from school leaders. Also, by giving school leaders the opportunity to talk freely about the system they use, we avoid social desirable answers on very specific questions, as could be the case in a questionnaire. Based on our theoretical framework, we coded the interviews to have a detailed overview of the actual outline

of the four characteristics identified as crucial in our theoretical framework: 1. The standards for acceptable teaching used in the school, 2. The sources of information being collected to assess teachers' practice, 3. The communication about the teacher performance appraisal system to teachers, and 4. The participation of teachers in setting up the teacher performance appraisal system. Based on the school leaders' descriptions of the outline of each characteristic of their own teacher performance appraisal system, the four characteristics were scored by the researcher. Each characteristic received a score from one to five. One being a poor score, five being an excellent score. This scoring was based on what the teacher performance appraisal literature puts forward as being necessary for good teacher performance appraisal[1].

Ten interviews, randomly selected, were scored by a second researcher. This second researcher was not acquainted with the research, but received training about the characteristics and the scoring details. We used Krippendorff's alpha to measure the inter rater reliability since this takes into account the measurement level. We found a reliability of .86.

Analyses

First, we report the descriptives for all study variables. Due to the nested design of our sample (teachers grouped with evaluators and teachers grouped per school), a second analysis we use is multilevel regression analysis. We test two null models (one for procedural justice and one for feedback utility) to decide whether there is variance which is caused because of the grouping of teachers with supervisors. Also, we test two null models (one for procedural justice and one for feedback utility) to check for variance caused by the grouping of teachers per school. If there is significant variance in procedural justice and feedback utility at the supervisor or school level, we will use multilevel analyses for our following analyses. Finally, based on these results and our theoretical framework, we put forward our final research model and examine this model using path analysis.

Results

Descriptives

We calculated descriptives for all variables measured in our study. These descriptives are reported in Table 1. This table shows several significant correlations. However, based on the fact none of the correlations exceeds 0.70 and the factor analysis discussed above, we believe our variables are sufficiently different measures of separate concepts. The means of the characteristics of the teacher performance appraisal system indicate overall positive values. Especially for teaching standards and communication, schools have high scores which indicates that they use in general more individualized standards for teaching and communicate clearly about the teacher performance appraisal system. The characteristics information sources and teacher participation both scored more neutral. This shows that schools in general use mostly information sources collected by the school leader and that teacher participation mostly is formalized in the form of union representation. The perception of teachers about the other study variables, charismatic leadership, procedural justice and feedback utility, have positive means. Hence overall, teachers perceive charismatic qualities in their school leader. They also believe the teacher performance appraisal system used is fair and produces useful feedback.

<Insert Table 1>

Null models

The second step in our analyses was to test the null models for two dependent variables, procedural justice and feedback utility, through multilevel regression analysis in SPSS 19. The estimates for these models are shown in Table 2.

The analyses to check for variance at the supervisor level showed the following results. For procedural justice, we found an intercept of 3.46. This intercept represents the overall mean of the perceived procedural justice by teachers. However the variance at the supervisor level for

procedural justice is not significantly different from 0 (Wald $Z= 1.651$, $p=0.099$). For feedback utility, the intercept which represents the overall mean of perceived feedback utility by teachers, shows a value of 3.38. The variance in feedback utility at the supervisor level is also not significantly different from 0 (Wald $Z=0.999$, $p=0.318$).

The results for the null models at the school level, revealed for procedural justice an intercept of 3.47. The variance at the school level for procedural justice was not significantly different from zero (Wald $Z = 1.365$, $p=0.172$). For feedback utility, the intercept at the school level was 3.39. School level variance was also not significant (Wald $Z = 1.098$, $p = 0.272$).

Hence, since no significant variance at the supervisor-level nor at the school level was found for both dependent variables, we decided to test our research model at the individual teacher level.

<Insert Table 2>

Path analyses

A first path analysis we conducted, was performed to test the fit of our research model we have put forward. Because several variables in the research model are measured through a single source method, we checked the condition number of the correlation matrix of the estimated parameters in order to detect possible multicollinearity problems. A condition number of 30 or higher indicates severe multicollinearity problems, however for the model we tested the condition number was 9.713 which provides strong support for the lack of multicollinearity problems. Our research model showed a reasonable fit ($\chi^2 = 33.565$ ($df = 14$, $p < .002$), CFI = .963, TLI = .927, SRMR=0.071 and RMSEA = 0.069). When looking at the regression weights of the hypothesized relationship, we noticed that several teacher performance appraisal system variables had no significant relationship with procedural justice. More specifically, only teacher participation significantly influences procedural justice. In this regard, the significant correlations of teaching

standards, communication and information sources with procedural justice seem to become smaller because of the larger significant relationship of teacher participation and procedural justice. The other hypothesized relationships (charismatic leadership to procedural justice and feedback utility; procedural justice to feedback utility) are also significant. Therefore, we decided to delete three variables from the model (i.e. appraisal standards, information sources and communication). Then we tested our new model through a second path analysis. This model showed a good fit ($\chi^2 = 8,828$ ($df = 4$, $p < .066$), CFI = .988, TLI = .969, SRMR=.047 and RMSEA = .064). Figure 2 shows our adjusted research model with standardized regression coefficients and explained variance for procedural justice and feedback utility. We conclude that, apart from hypothesis 1 of which only part 1d was confirmed, all other hypotheses are confirmed through our path analyses.

<Insert Figure 2>

Discussion

Most research on performance appraisal is situated in the corporate sector. Studies in the nonprofit sector are more limited and performance appraisal has rarely been analyzed in education. It is important to understand whether performance appraisal in different contexts is similar or differs according to the sector's idiosyncrasies. This study on teacher performance appraisal contributes to this key question. Moreover, a lot of doubts exist on the usefulness of performance appraisal, as a HRM practice, to improve individual and organizational performance (Frase and Streshly, 1994). This is also the case in the educational context. The results of our study are crucial since they indicate that teacher performance appraisal should not be given up. Our results suggest that teacher performance appraisal as a HRM technique might be able to improve teacher performance. In this regard, our study contributes to the "opening the black box" debate about the effects of HRM on performance at the individual level by identifying an

important teacher performance appraisal characteristic, i.e. teacher participation, and leadership characteristic, i.e. charismatic leadership which influence the perceived procedural justice and perceived feedback utility. This influence is believed to be an important step towards the actual improvement of teacher performance. On the one hand, teachers' positive perceptions on procedural justice are important for the acceptance of teacher performance appraisal systems, especially in the field of education where professional autonomy should be respected and requires careful attention to fair and valid supervision. On the other hand, positive perceptions on feedback utility are believed to be an important premise for actual changes in teachers' practice (e.g. Ilgen *et al.*, 1997). Moreover, our model clarifies the relationships between the teacher performance appraisal system, school leadership, procedural justice and perceived feedback utility.

The strongest relationships in our model stem from the charismatic leadership variable. Charismatic leadership influences both directly the perceived procedural justice and the perceived feedback utility. These relationships are significant and the largest in our model. This is in line with research conducted in the field of performance appraisal (e.g. Nathan *et al.*, 1991;) which found that the relationship between leaders and employees is an important factor in performance appraisal. Also, in the field of teacher performance appraisal research, Milanowski and Heneman (2001) identified the evaluator as influential for teacher satisfaction with the teacher performance appraisal system. Hence, previous research found the same importance of leadership, especially leadership that focuses on relationships and charisma. Our research contributes to these findings because, to our knowledge, research about the influence of charismatic leadership for performance appraisal is scarce. In this regard, we demonstrate that leaders who are perceived as charismatic in the performance appraisal process might contribute to perceived procedural justice and perceived feedback utility. Moreover, as pleaded for by Avolio *et al.* (1999), our research

contributes by demonstrating the importance of charismatic leadership itself while most research focuses on the broader transformational leadership perspective of which charismatic leadership is a component.

The empirical study of teacher performance appraisal system characteristics is a second contribution to the research field of performance appraisal. Our main finding here demonstrates the direct influence of teacher participation in the teacher performance appraisal system for the perceived procedural justice. However, although significant, this relationship is rather small. Also, the other variables regarding the teacher performance appraisal system (teaching standards, information sources and communication) did not influence the perceived procedural justice in our research model, although this was expected when looking at the significant correlations between teaching standards, communication and information sources with procedural justice. However, procedural justice was mainly influenced by charismatic leadership. We do have to acknowledge the significant relationship between teacher participation and procedural justice which pleads for more teacher participation in teacher performance appraisal because this enhances the belief of teachers in a fair teacher performance appraisal system. This result is in line with other research regarding other types of participation and their effects on appraisal reactions (Cawley *et al.*, 1998). Our study contributes to the need for more empirical research about the performance appraisal structure (i.e. characteristics of the system that form the design of the performance management process) as expressed by Levy and Williams (2004) and reveals characteristics which might need further investigation.

The grouping of teachers with evaluators and in schools led us to believe we might find significant variance at the evaluator or school level. However, this significant variance in procedural justice and feedback utility at the evaluator and school level was lacking in our study. Previous research (e.g. Naumann and Bennett, 2000) on procedural justice showed variance at the

organizational level. However, this research took place in a different context than ours. We focused our research on teachers who recently received a private appraisal conference with their supervisor. In this regard, the perception of procedural justice might be a personal experience from the individual teacher. Moreover, to our knowledge the existing multilevel research on procedural justice does not focus on procedural justice of performance appraisal. Also, for feedback utility, we might apply the same reasoning. Probably, the perceived utility of feedback is influenced by several individual teacher characteristics. Moreover, for feedback utility, to our knowledge, there is no existing multilevel research.

Our study demonstrated the importance of the control variable, job experience by showing a significant negative relationship between job experience and the perceived feedback utility. Hence, more experienced teachers perceive the feedback they receive during an appraisal conference as less useful than their less experienced colleagues. This is in line with the hypothesis which Ilgen *et al.* (1979) propose about the effects of age or experience of employees on their willingness to accept feedback. To our knowledge, there are not many studies on performance appraisal that control for job experience.

Overall, our study sheds a brighter light on teacher performance appraisal. Teacher reactions to teacher performance appraisal in the form of perceived procedural justice and perceived feedback utility are positive. This is promising for the effectiveness of teacher performance appraisal as a mean to improve teaching. Especially the perceived feedback utility is an important condition if school leaders want to improve teaching practice by giving feedback because there is a general agreement that teachers will only react upon feedback they perceive as useful (Ilgen *et al.*, 1979).

Limitations and future research

Certainly, there are limitations to our study that require future research. As a methodological limitation, we should take into account the mostly single source character of our study. In this regard, we did pay careful attention to the possible problems related to this type of measurement by checking for multicollinearity and by performing confirmatory factor analysis. To avoid the limitations of a single source study, we explicitly included a second source (i.e. school leaders) in our study. Accordingly, several independent variables were measured through a different source than our dependent variables. However, our attempt to measure several variables of our research model through a qualitative data collection with school leaders, did not entirely lead to the expected results. In our final model we lost three of the four characteristics of the teacher performance appraisal system. The conceptualization and scoring method we used to score these characteristics, while carefully chosen, might have influenced our results. Inevitably, the definition we used to score the characteristics, involves choices which means certain aspects of the characteristics are not taken into account (e.g. the amount of teaching standards or the longitudinality of information sources). Hence, more research, also qualitative, is needed to fully explore the effects of these characteristics.

Moreover, as a second methodological limitation, we should take into account the cross sectional nature of our study which does not allow us to confirm the suggested causality in our research model. While our research model was carefully constructed based on existing theory, more longitudinal research is necessary to study the directions of the relationships we assumed in our model. In this regard, there still is some theoretical disagreement on the relationship between procedural justice and charismatic leadership which needs further research. Also, the further discovery of the black box between HRM and performance could benefit from more longitudinal research that could measure the actual changes in the teaching practice caused by the feedback offered during teacher performance appraisal.

Also, apart from these methodological limitations, we would also suggest for future research to elaborate our research model with more variables. In this regard, we do recommend more research that takes into account several other leadership characteristics, apart from charismatic leadership since leadership has a strong relationship with both procedural justice and feedback utility. Also, although we clearly chose to involve procedural justice in our model, it might be useful for future research to integrate the other types of justice (i.e. distributive justice and interactional justice) to have a more complete view on the importance of justice perception in the context of teacher performance appraisal. In our context, the use of distributive justice is less relevant due to the lack of clear outcomes except for qualitative feedback. However, in several countries (e.g. Portugal, USA) the concepts of merit pay and bonuses are implemented. Hence, distributive justice might be an important variable to integrate in future studies in these context to evaluate these practices.

Practical implications

Our study has several practical implications for the teacher appraisal practice in schools. First, school leaders should not take teacher performance appraisal for granted. Through teacher appraisal, they can actually influence the perceived feedback utility by teachers which is a premise for teacher action (e.g. professional learning, changes in teaching practice). Second, our study demonstrates the importance of the development of the teacher appraisal system that will be used in the school. More specifically, it is pivotal that teachers can participate in the development and implementation of teacher appraisal. In this regard, our results strengthen the knowledge about the importance of participation and should encourage schools and organizations to provide participation opportunities for their personnel during the development and implementation of appraisal, next to other participation opportunities during the actual appraisal process (e.g. employee input during the appraisal interview, opportunities for self assessment). A

third practical implication relates to the selection and training of school leaders. Our research identifies charismatic leadership as an important leadership characteristic to perform teacher appraisals. In this regard, the selection and training of school leaders could take into account this finding to consider charismatic leadership as an important selection criterion or to focus explicitly on key characteristics of charismatic leadership in school leadership training (e.g. importance of being an example for teachers; inspiring teachers).

Conclusion

This study demonstrated the importance of the school leader for teacher performance appraisal. He/she has a high responsibility when conducting teacher performance appraisal, but also when setting up a teacher performance appraisal system. In this regard, our research showed it is essential for teachers to be able to participate in the development and enactment of teacher performance appraisal systems. Charismatic leaders who are able to inspire teachers and create an environment of trust, enhance the feeling of procedural justice regarding the appraisal system and the perceived utility of feedback. Hence, we should be hopeful that teacher performance appraisal might improve teaching practice. However, more research is needed to confirm our results and to study the actual changes in teacher practice caused by feedback from teacher performance appraisal.

Note

1. More information concerning the coding and scoring of the interview data, can be requested from the first author of the manuscript.

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Table 1. Means, standard deviations and correlations of study variables.

Variable	M	SD	1	2	3	4	5	6	7
1. Teaching standards	4.14	.50							
2. Information sources	3.19	1.20	-.056						
3. Communication	4.32	.84	.205***	.217***					
4. Teacher participation	3.36	.84	.211***	.397***	.408***				
5. Charismatic leadership	3.51	.66	.143*	.223***	.079	.076			
6. Procedural justice	3.46	.64	.150**	.205***	.139*	.217***	.615***		
7. Feedback utility	3.36	.89	.085	.141*	.033	.017	.689***	.498***	
8. Job experience	14.65	10.82	/	/	/	/	-.002	.057	-.255***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 2. Model estimates for the two-level analyses of procedural justice and feedback utility

Supervisor level			
Parameter		Null model Procedural justice	Null model Feedback utility
Fixed	Intercept	3.46 (0.049)	3.38 (0.057)
Random	Level 2 - supervisor σ^2_{u0}	0.040 (0.024)	0.033 (0.033)
	Level 1 - teachers σ^2_{e0}	0.371 (0.033)	0.637 (0.057)
Model fit	Deviance	575.243	721.706
School level			
Parameter		Null model Procedural justice	Null model Feedback utility
Fixed	Intercept	3.47 (0.052)	3.39 (0.061)
Random	Level 2 - school σ^2_{u0}	0.027 (0.020)	0.029 (0.026)
	Level 1 - teachers σ^2_{e0}	0.381 (0.033)	0.640 (0.055)
Model fit	Deviance	575.204	720.216

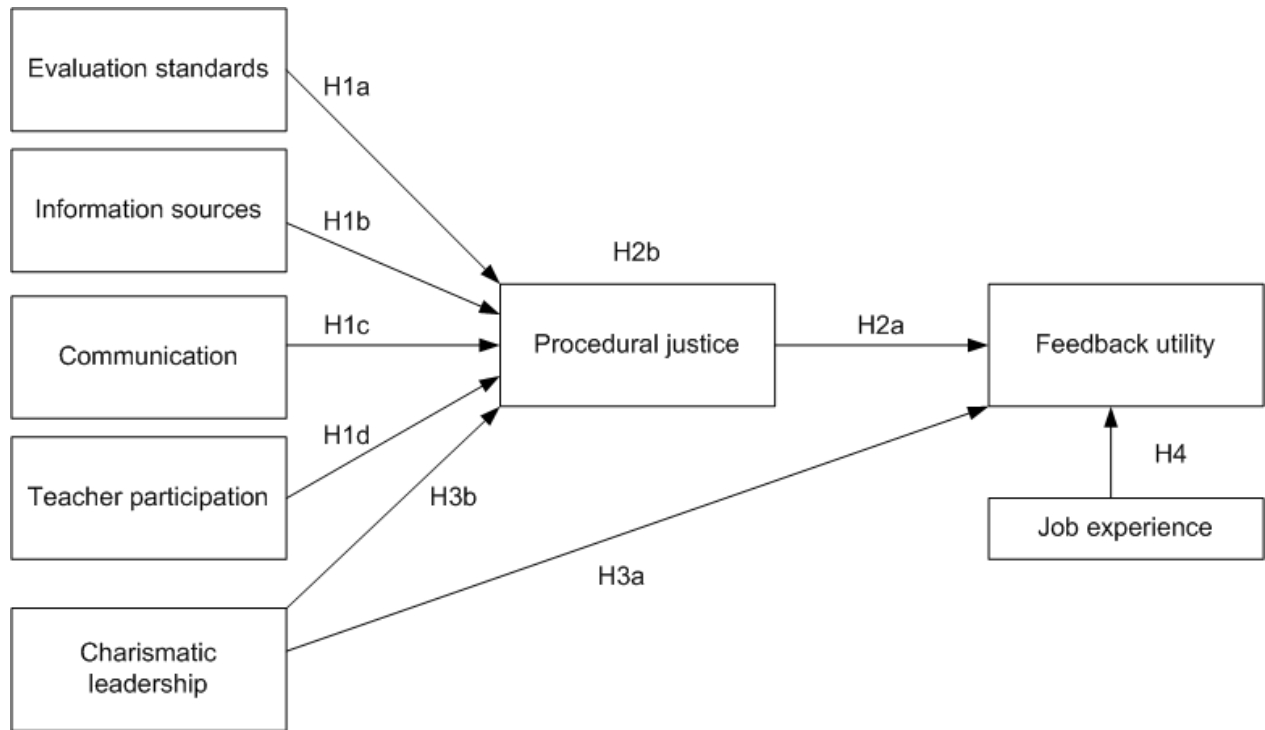


Figure 1. Theoretical framework

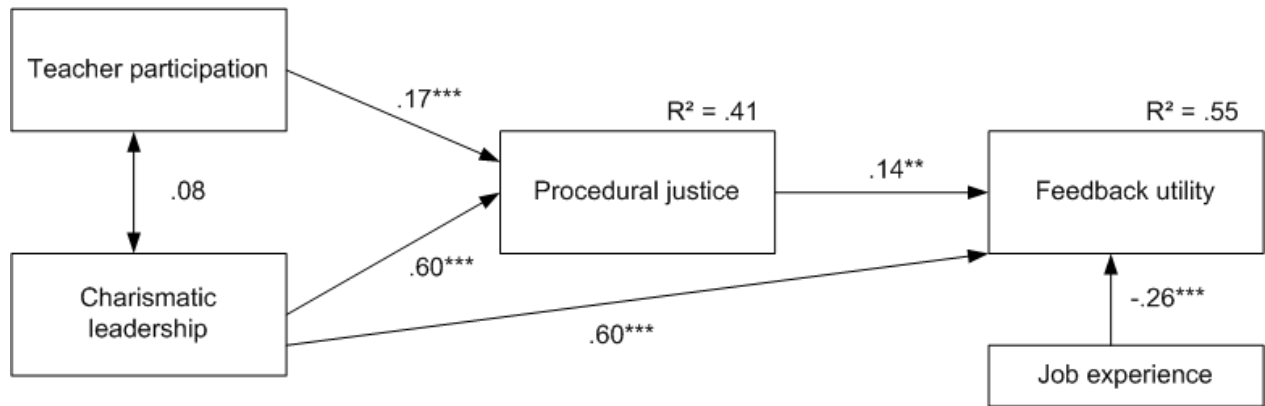


Figure 2. Adjusted research model with standardized regression coefficients ($** p < .01$; $*** p < .001$)