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Teachers' perceived societal appreciation: PISA outcomes predict whether teachers feel valued in society

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ABSTRACT

Typical of the teaching profession is the multitude of actors that comment on and evaluate teachers' work. Previous studies indicate that teachers feel that their work is relatively underappreciated in society. Little is known about the dynamics that explain apparent variation in this feeling. Based on data from 66,593 teachers in 25 countries we study variation of Perceived Societal Appreciation (PSA). We find robust evidence that a change within countries in PISA scores predicts a within country trend in levels of PSA. In the conclusion we critically engage with contemporary OECD policies by arguing that inducing a crisis mentality about educational quality risks accomplishing the exact opposite than what one aims for.

1. Introduction

More than in any other profession, teachers' work is commented on and evaluated by multiple actors (e.g., pupils, parents, school leaders, the public at large, policy makers and international organizations). Studies by the OECD also have shown that teachers' often feel that their work is underappreciated in society (OECD, 2014a; 2020b). Little is known, however, about the dynamics that explain variation within this feeling. Insight in these dynamics is crucial because the feeling that one's work is valued not only by school actors (e.g., pupils, parents) but also by society in general is an important factor in retaining teachers and persuading high-achieving students to consider a teaching career (Han, 2018). The latter is acknowledged by policy makers and politicians who regularly plea for the 'revaluation' of the teaching profession and are looking for ways to increase the prestige of the teaching profession to avoid teacher shortages and increase educational quality. At the same time, however, a body of literature has repeatedly pointed towards general tendencies in educational policies that potentially decrease teacher's autonomy and de-professionalize their work (e.g., Ballet, Kelchtermans, & Loughran, 2006; Milner, 2013). Among other things, intense media campaigns following decreasing outcomes on international student assessment like PISA, have in many countries led to so called 'PISA panic', i.e. the idea that a country's education is in a deep crisis (Piro, 2019). When teachers feel they are held accountable for such low(er) student performances, this may undermine teachers' perceived societal appreciation. Against that background, this paper addresses the question *what makes teachers feel valued in society and why?* We contribute to the literature in two ways. *At the theoretical-conceptual level,* we discuss the characteristics of the feeling that one's work is valued in society by relating it to more general social-psychological concepts. The feeling that one's work is valued in society – Perceived Societal Appreciation (PSA) – redirects the focus from individual-oriented characteristics (such as job

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satisfaction and teaching efficacy) to membership of a professional category. It situates 'being a teacher' in the area of group relations and social/occupational identities, an area which has not yet received the attention that it deserves (Beijaard, Meijer, & Verloop, 2004). The existing literature on intergroup relations enables us to formulate clear hypotheses concerning expected patterns in the variation of the feeling of doing work that is valued in society. These hypotheses are tested at the *empirical level* based on data from 25 countries, 4,307 schools, and 66,593 teachers (ISCED 2) gathered in the most recent wave (2018) of the *Teaching and Learning International Survey* (TALIS). We find that although the explanatory power of individual and school level characteristics is modest, there is a rather strong relationship between PSA and (within-country trends in) PISA outcomes at the country level. In the conclusion we use our findings to critically engage with contemporary educational policies and the strategy of authoritative organizations like the OECD.

2. Theory

2.1. Feeling of doing work that is valued in society

In this section we discuss the theoretical-analytical properties of the feeling that teaching is valued in society and the importance of studying this feeling. Perceived societal appreciation (PSA) can be seen as a specification of what social psychologists call 'collective social esteem' (Branscombe & Wann, 1994; Luhtanen & Crocker, 1992). According to social identity theory, people do not only strive for a positive personal self-image, but also long to belong to a group that is respected in society (Tajfel & Turner, 1986). In this context, Luhtanen and Crocker (1992) developed a scale to tap into collective social esteem, as separate from personal self-esteem. One sub-dimension of this scale refers to perceived public appreciation (PSA). It is this sub-dimension that we focus on here.[1]

Perceived societal appreciation distinguishes itself in two ways from several measures of satisfaction, like job satisfaction or feelings of efficacy (Luhtanen & Crocker, 1992). First, PSA has a pronounced *dialogical character* and, as such, it never exclusively results from a strict personal interpretation of one's work. PSA originates in the reactions of others to a much greater extent than, for instance, job satisfaction. This feature also renders PSA inherently *relative* to other occupations. The feeling that one's occupation is valued in society is clearly related to what Hoyle (2001) calls social esteem (social recognition), and in that way constitutes one dimension of the social status of an occupation. It, however, does concern the social recognition *as experienced by teachers*. Indeed, it is possible that the social recognition/appreciation of an occupation among the public at large is quite high, while at the same time the members of that occupation experience it in a different manner. In case of teachers, research has indicated that the appreciation of teachers by the public is generally high but teachers themselves perceive societal appreciation as low (OECD, 2020b; Verhoeven, Aelterman, Rots, & Buvens, 2006). In that sense, PSA does not completely dovetail with social status, but rather refers to the *perceived* recognition of a profession (Dolton, Marcenaro, De Vries, & She, 2018; Hargreaves, 2009).

The second crucial feature of PSA is that it does not so much refer to a judgement concerning one's *personal* work but rather to the work of the *occupational category* in general. Even if one believes one performs well and finds evidence of this in the reactions of others, a person may feel that, in general, the work of one's occupation is undervalued in society. That feeling might have consequences regarding teacher retention.

Social identity theory holds that people have multiple social identities whose relative importance and salience varies according to both individual and contextual characteristics (Owens, Robinson, & Smith-Lovin, 2010). There are three good reasons to assume that being a teacher is an important social identity for people and, thus, that PSA matters to teachers. First, being a teacher is an *achieved* status, in contrast to *ascribed* group memberships based on one's age, ethnicity, etc. Teachers have deliberately chosen, often after due consideration, to become a teacher. Second, teaching is an occupation and one's professional live normally occupies a central place in one's life – it is a time-consuming activity, and in small talk questions concerning one's occupation easily pop up. Both factors suggest that being a teacher is a salient social identity, implying that teachers are likely to be sensitive to references to their occupational category in the public sphere. The public, in turn, is likely to have an opinion on teachers. Teachers constitute a large and well-known occupation – everyone has followed some sort of education; people with children often have contacts with teachers, etc. (Hoyle, 2001; Ingersoll & Collins, 2018). Third, as a group, teachers score high on intrinsic and altruistic motivations (Struyven, Jacobs, & Dochy, 2013). Contributing to the development of children and society are important motivators for teachers. It seems obvious that such a group strongly identifies with being a teacher and along this way (Owens et al., 2010) are particularly sensitive to judgements reflecting the level of appreciation within society.

The importance of (a lack of) PSA becomes clear as soon as we take into account the potential *consequences* of collective social esteem (of which PSA is a component). Just like self-esteem often moderates the impact of an individual's experiences (e.g., dealing with critique, being open to feedback) and thereby acts as a buffer, collective social esteem functions as "an important moderator of in-group bias, in-group serving attributions, and other collective, or group-level strategies discussed in social identity theory" (Luhtanen & Crocker, 1992, p. 303). Brewer (1991, p. 481) puts it very clear "collective identities buffer the individual from many threats to self-worth and it is time their motivational significance is clearly recognized in social psychology's understanding of self" (see also Moore & Hofman, 1988). Indeed, lower collective social esteem turns out to be associated with higher levels of burnout (Butler & Constantine, 2005). Experimental research has also shown that as long as a 'threat' does not decrease people's collective social esteem,

[1] This dimension was measured with the following items: 'In general, others respect the social groups that I am a member of', 'Overall, my social groups are considered good by others', 'Most people consider my social groups, on average, to be more effective than other social groups', 'In general, others think that the social groups I am a member of are unworthy' (Luhtanen & Crocker, 1992, p. 305). Luhtanen and Crocker's research also suggests that applying the items to a specific group does not affect the psychometric properties of the scale.

they do not develop outgroup bias or derogation (Branscombe & Wann, 1994). Crocker and Luhtanen (1990) found even more complex relationships whereby people who scored high on collective social esteem showed more in-group favouritism, whereas for people with low collective social esteem a threat led to more outgroup bias or derogation (i.e., a closing off from the outgroup without entailing the development of positive in-group feelings; see also Brown, Collins, & Schmidt, 1988). In such circumstances a threat has only negative consequences.

It is easy to imagine how these well-documented mechanisms might apply to teachers. Criticism of an occupational category constitutes a 'threat' for those who belong to it (especially for those who are emotionally attached to it) and 'the outgroup' can pertain to everyone who is considered as 'non-teachers' by teachers. It is important to keep in mind that collective social esteem is broader than just the perceived public esteem on which we will focus. But we know that the latter (1) strongly correlates with other dimensions of collective social esteem (Luhtanen & Crocker, 1992), and (2) it is also reasonable to assume that threats generate their effect mainly *via* the public dimension of collective social esteem. In addition, PSA may not only affect the current but also the future teaching force. Indeed, Han (2018) showed that a 1% increase in the percentage of teachers who believe that teaching is valued in society is associated with a 1% increase in the odds that students (participating in PISA) wish to work as teachers.

To sum up, in this article we consider the feeling that the work of one's profession is valued in society as an element of collective social esteem which is known to have independent effects. We expect that PSA is related to measures of personal satisfaction, but also that it can be empirically clearly distinguished from them.

2.2. Expected variation in perceived societal appreciation

By referring to social recognition, feelings of perceived societal appreciation relate to the social identity associated with being a teacher. To formulate more concrete expectations about the variation in these feelings we rely on theory on intergroup processes and social status (Jasso, 2001). Based on that literature, we distinguish three general status-related mechanisms that may predict variation in PSA: (1) the impact of PISA results and their effect on public discourse on the perceived quality of education, (2) salary and working conditions, and (3) characteristics of the access to the teaching profession.

To begin with, typical for whatever aspect of a social identity, social status and intergroup relations is the emphasis on the role of *social communication.* (Social) identities and the associated social esteem are not static properties that inhere in an individual, but relational phenomena formed and activated *in* and *through* communication (Beijaard et al., 2004). This implies that if we aim to get a grip on PSA we have to take into account how education and teachers are discussed in the public sphere. Such discussions are likely to have become more prevalent in recent years. Indeed, economically developed countries whose welfare depend on innovation and product development, strongly adhere to the idea that high quality education is the key element to economic prosperity. They are strengthened in that idea by the rhetoric of international organisations like the OECD. One consequence of this increased attention for educational outcomes is that teachers have lost their monopoly on evaluating students' educational performance. Teachers are increasingly confronted with standardized testing, value-added assessments, and international performance comparisons. Typically, the results of such assessments are made public. Moreover, techniques like the production of rankings ('an academic Olympiad', 'governance by comparison') or the translation of PISA scores into GDP-improvement potentials, render mass media keen to devote extended attention to the dissemination of PISA results (Bulle, 2011), leading in countries with low or decreasing results to 'PISA panic' and calls for policy change (Pizmony-Levy, 2018). Indeed, precisely because OECD has no 'formal' power to change country-level educational policies it aims to have impact on the latter by attracting much public attention for PISA results and to provoke public debate about educational quality (Hopfenbeck & Görgen, 2017; Takayama, 2008). Several scholars have described the successful alliance between the OECD and media to stimulate educational debates. These debates have two characteristics. On the one hand, these debates attempt to achieve 'momentum' – a sense of urgency – by fostering a sense of crisis (Piro, 2019). Indeed, research shows that PISA results receive more media coverage in a country when performance scores are lower (Grek, 2009). On the other hand, discourse analysis reveals that in OECD rhetoric teachers are presented as the key drivers of good education who should be granted autonomy (Petterson & Molstad, 2016), for example, by emphasizing that the "quality of an education system cannot exceed the quality of its teachers" (Schleicher, 2018, p. 126). This decontextualized view on the role of the teacher (i.e., as separated from structural characteristics of the educational context in which they have to operate) *and* the association between educational and teacher quality, pave the way for an international discourse that 'blame' teachers for low student achievement (Auld & Morris, 2016). Taken together, these elements lead to idea that especially low PISA outcomes will receive media attention and that the general public is stimulated to hold teachers accountable for the underachievement. This becomes all the more important because contemporary 'schooled' societies (Baker, 2014) are characterized by a large and established middle class which strongly relies on education for the intergenerational transmission of their social position. Such a middle class is haunted by a permanent fear of a decrease in educational quality and the associated future of their children (Currid-Halkett, 2017), and for this reason is very sensitive to 'PISA panic'. Several studies have indeed shown that PISA outcomes affect the public's trust in and satisfaction with education (Fladmoe, 2012, Pizmony-Levey & Bjorklund, 2017). Research shows that despite widespread scepticism towards public tests among teachers, the outcomes of these tests do affect teachers' school and teaching practices (Vestheim & Lyngsnes, 2016).

The preceding arguments enable us to formulate two specific hypotheses concerning expected variation in PSA at the country level. *We expect that (1) in countries that perform well on the PISA tests, the feeling that the work of teachers is valued by society is higher*. Previous research showed some tentative support for this expectation (Dolton et al., 2018; OECD, 2020b). Replicating such relationship is especially important because the multilevel structure of the data is not explored in full detail in OECD publications. In addition, and crucially, if this mechanism applies, this should also imply that not only *the absolute PISA level* matters but (2) also the *change in PISA scores*. Especially in countries for which an authoritative institution, like the OECD, indicates that test scores and the associated

educational quality are declining, one would expect that teachers feel they are being held responsible and thus less valued in society.

The same mechanism may also predict between-school differences in PSA. A core proposition of the literature on school effectiveness is that schools and teachers should be judged based on pupils' *academic progress,* the difference between what a pupil knows before and after having followed education. Academic progress, however, can only be assessed with longitudinal designs and thus often remains out of sight – PISA tests, for example, do not measure academic progress. As a result, public debates usually take absolute test scores as their reference point. This implies that *people who teach in schools with a higher number of pupils with disadvantaged backgrounds are more likely to feel less valued in society* because (1) the final attainment level of their pupils may be lower and (2) their schools are more often confronted with problems that are represented in public debates as 'educational problems', even if it is known that schools can do little to solve them.

The previous arguments link teacher perceived societal appreciation to study performances of their pupils. To properly test our expectations, however, we should also take into account other elements such as teachers' working conditions. Status elements are always related to scarceness and, when translated to the group we study here, a matter of the accessibility of an occupation. Starting from these two elements, the simplest way to generate a feeling of scarcity is to offer good salaries and working conditions. The 'homo economicus' principle holds that everything that is valued has its price and people who enjoy good working conditions and salaries are also seen in society as 'important'. Research from Park and Byun (2015) showed that in countries with higher relative wages for teachers, high-performing pupils are more inclined to consider a teaching career (see also Chevalier, Dolton, & McIntosh, 2007; Dolton, Marcenaro, Pistaferri, & Algan, 2011). The relationship between teacher salaries and student performances is, however, much less clear (Akiba, Chiu, Shimizu, & Liang, 2012). In this study, we test this mechanism of societal appreciation by assessing whether *teachers feel more valued in society when (1) they themselves are more satisfied with their relative salaries and labour conditions (individual level) and/or (2) work in countries (country level) with higher relative wages for teachers (objective indicator) and/or more teachers are satisfied with their wages (subjective indicator)*.

A final set of relevant characteristics refer to the access to the teaching profession. Scholars who study status-related matters suggest that status and the associated valuation mainly derive from *scarcity*. That idea directs attention to the entry requirements of the teaching profession. Countries vary strongly in the extent to which people are allowed to teach or enrol in teaching training. In that context, a (competitive) exam is often proposed as a means to increase the status of a profession. Such an exam not only has an effect because it allows governments to select the most talented candidates, it is also effective due to its labelling effect. Indeed, an entrance exam is a 'rite of passage' that is visible, recognisable and that labels students who pass as 'special'. Based on this reasoning, one expects that *PSA is higher in countries where access to the teaching profession is regulated by a (competitive) entrance exam*.

A (competitive) entrance exam is, however, but one of the possible gate keepers to the teaching profession. Two other often discussed gate-keeping practices are: (1) the request of a high(er) educational level for teachers and (2) a low level of so-called out-of-subject teaching, that is, teachers who teach subjects for which they did not get formal training (e.g., someone who teachers Mathematics but was trained as a Language teacher) (Clotfelter, Helen, & Jacob, 2010; Park & Buyn, 2015). Professional work is complex and requires specialised knowledge and skills acquired through rigorous training. This training and the associated licensing requirements, in turn, constitute one factor that grants a profession its social status and prestige. Such prestige becomes undermined when (1) there are many alternative and less restrictive routes into the profession – 'fast-track teacher preparation and licensure' - (Ingersoll & Collins, 2018, p. 203) or (2) a large number of teachers teach subjects that do not match their specialties. Both elements are considered crucial elements in the de-professionalization of the teaching profession (Milner, 2013). Thus, we expect *PSA to be higher in countries where the number of teachers that obtained a master's degree is higher and/or the level of out-of-subject teaching is lower.*

2.3. Specific expectations regarding the control variables

In addition to indicators that can be derived from the literature on intergroup processes and social status, we also include a number of *individual-level* indicators for which it is reasonable to expect a relationship with PSA. We include them into the analysis (1) to achieve a more comprehensive view on systematic variation in PSA *and* (2) to correctly estimate school- and country-level variation in PSA.

Regarding socio-demographics we include *gender, the level of teaching experience, and type of contract.* The feminisation of the teaching profession implies that, as a group, male teachers are a more select group than female teachers (Drudy, 2008). Male teachers may choose to work in the teaching profession for very specific reasons (Won Han, Borgonovi, & Guerriero, 2020), possibly rendering them more immune to judgments about the profession by outsiders. Regarding teaching experience, it can be expected that more experienced teachers show higher PSA than their less experienced counterparts. Indeed, to the extent that a lack of PSA drives people out of the profession, the selection effect should lead the group of more experienced teachers to be more homogeneous in terms of (higher) PSA. Moreover, experience itself may also be relevant here. More experienced teachers may be more effective in defending their approach in discussions with parents and other parties, which may translate to higher PSA. Starting from a similar reasoning, we also include the extent to which people have a *permanent contract* (who have less to worry direct effects of parents' who complain about their work) in the models and expect that teachers with a permanent contract to report higher feelings of societal appreciation.

We also include indicators that refer to the *motivation profile* of teachers. Teachers who considered teaching as *their first career choice* and teachers who were attracted to the profession for *intrinsic reasons* (e.g., to support child development, to contribute to society) are expected to draw more satisfaction from 'teaching' itself and this may be reflected in their feelings of being valued in society. At the same time, it is also reasonable to expect a relationship between perceived valuation by society and *extrinsic motivations.* In most countries the labour conditions of teachers are reasonably good, even if there are occupations with much higher salaries, so that being a teacher may fulfil typical material needs such as earning a descent salary (Dolton et al., 2018).

Although, as explained earlier, we hold that PSA should be distinguished from perceptions of one's personal functioning (e.g., efficacy and satisfaction measures), it is likely that both are, to some extent, related. Research into personal and collective self-esteem, regularly found that both are positively correlated (e.g., Chung, 2019; Long & Spears, 1998). Therefore, we also take into account the *perceived teaching efficacy* (which can be seen as a proxy for personal self-esteem), active participation in school policy and job satisfaction. We expect that teachers who feel more effective and who actively contribute to school policies are satisfied with their job, thus leading them to feel that the teaching profession is more valued in society.

Although the direction of causality for each of these characteristics is difficult to determine, including them in the models is primarily a means to correctly estimate the pure 'social component' in PSA.

3. Methods

3.1. Data

In this study we used data from the third wave (2018) of the *Teachers and Teaching International Survey* (TALIS). For some analyses we also include data from the second wave (2013).[2] The focus of TALIS 2018, which was used for the purpose of this study, was on lower secondary education (ISCED 2). Schools were selected using systematic random sampling with probability proportional to the size (PPS) of teachers within the explicit strata, such as the type of funding, according to the specific context of each country. Teachers were randomly selected in each of the selected schools. TALIS uses strict procedures to ensure comparability of data. Each participating country is required to achieve a response rate of at least 75% of the selected schools and teachers. A school is considered to be participating if at least the principal and 50% of the teachers participated in the survey (for a detailed description of the sampling and quality control procedures see OECD, 2019b). After deleting cases which had missing values for one of the variables included in the analyses, our final sample for the multilevel analyses comprises of data from 25 countries/regions (Australia, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Iceland, Italy, Japan, South Korea, Latvia, Netherlands, Norway, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Turkey, England, Romania, Belgium (Flanders), Belgium (Wallonia)), 4,307 schools and 66,593 teachers (ISCED 2).

3.2. Measures

At the *individual level* we included gender (0: men), having a permanent contract (0: temporary contract), holding a master's degree (0: no master), full employment (0: part-time), and numbers of years of work experience (continuous). The motivation profile of teachers was measured with three indicators: whether teaching was their first career choice (0: teaching not first career choice), and the TALIS measures for intrinsic (3 Likert items, e.g. 'Teaching allows me to provide a contribution to society'; Cronbach's alpha = 0.83) and extrinsic motivation (4 Likert items, e.g. 'Teaching is a secure job'; Cronbach's alpha = 0.87). Job satisfaction with their work environment was measured with 4 Likert items (Example item: 'I enjoy working at this school'; Cronbach's alpha = 0.79), while satisfaction with their salary was measured with one Likert item 'I am satisfied with the salary I receive'. Finally, teaching efficacy was measured with 12 Likert items (Example item: 'I get students to believe they can do well in their schoolwork'; Cronbach's alpha = 0.98).

Out-of-subject teaching was measured with a continuous indicator that reflects whether a teacher instructs a course that was not included in his/her formal education. Teachers were presented with 11 broadly described domains and indicated (1) whether they taught courses in this domain and (2) whether this domain was included in their formal education. Higher scores on the out-of-subject indicator signifies that more domains were taught that were not included in people's formal education. Active participation in school policies was measured with 8 Likert items (e.g., 'This school provides staff with opportunities to actively participate in school decisions'; Cronbach's alpha = 0.88). To be able to assess pure individual level relationships, all continuous variables were group-mean centred using the group mean per school as suggested by Hox, Moerbeek, & van de Schoot (2018).

At the *school level* we included the percentage of pupils with a disadvantaged background which was group-mean centred using the group mean per country. School leaders estimated the proportion of students in their schools who are from socioeconomically disadvantaged homes on a 4-point Likert-type scale ranging from 1 = none to 4 = more than 60%.

Concerning the *country level* variables, we included three types of indicators. First, regarding teachers' relative salaries we used an indicator that reflects teachers' 'objective' relative starting wages as reported in the most recent Education At a Glance report (OECD, 2019a). For Bulgaria, Croatia and Portugal, this information was missing. For these countries we use data from the Eurydice report (European Commission, EACEA/Eurydice, 2019), which we adjusted to the purchasing power parity in 2018 and expressed in US dollar in order to conform to the methodology used in the Education At a Glance report. As well as this more 'objective' measure, we also included a 'subjective indicator' by aggregating the teacher's satisfaction with their salary to the country level.

A second type of country-level characteristic concerns gate-keeping practices. The measure for the presence of a competitive entrance exam was adopted from a PISA overview of the official conditions to begin teacher training in 2013 (OECD, 2016). As this information was lacking for 9 countries, we imputed missing values with data from our own expert survey among 108 national educational experts in 48 countries ([Author removed for review]). We also included the percentage of teachers with a master's degree

[2] The question that taps into PSA was not included in the first wave of TALIS in 2008.

in a country and the aggregated level of out-of-subject teaching in a country.

A third series of country-level indicators relate to PISA outcomes. We used data from different rounds and focus both on scores and rankings. All PISA scores/ranks were derived from official OECD publications (OECD, 2010, 2014b, 2020a).

Table 1 provides descriptives for all variables used in the analysis.

3.3. Analysis

We use three level multilevel linear regression models to assess teacher-, school- and country-level predictors on perceived societal appreciation simultaneously. As our dependent variable only has four categories, we estimated our results three times, where we treated the dependent variable in a different way during each run (continuous, ordinal and dichotomous; see Technical Appendix). As these analyses led to the same substantive conclusions and the results of the multilevel linear regression analyses are most easy to interpret, Table 2 shows these results. We performed additional robustness tests by running the models with multilevel (ordinal) logistic regression and also tested our models on a larger sample by including data from Singapore and the United States of America (27 countries and 71,927 teachers; information about the starting salaries and the competitive entrance exam were missing for Singapore and the US, respectively). These results are available in Supplementary File (https://osf.io/982zy/?view_only=8acbd39d8a254ac7af50d3a79fa3e7b1) and confirm the robustness of the findings presented in the current article.

4. Results

4.1. Measuring the feeling that teaching is valued in society

Before presenting the results of the multilevel analyses, we first explore our dependent variable. Teachers rated whether they thought teaching was valued in society on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The feeling that the work of teachers is valued in society (PSA) strongly varied between countries (Fig. 1). PSA was highest in two Asian countries (Singapore: 72% (strongly) agree; South Korea: 67%). In Europe, Finnish teachers (58.2%) reported the highest feelings of perceived societal appreciation. PSA was lowest in Slovakia (4.5%) and France (6.6%). On average, only about 27.8% of all teachers included in our analyses agreed that the work of teachers is valued in society.

A comparison between 2013 and 2018 shows, for all countries that participated in both waves, trends across the five years. In general, PSA levels remained relatively stable (+0.2% percent points), but there was variation within that general pattern. In Flanders, for example, the number of teachers who felt the work of their profession is valued in society dropped by more than 20 percent points.

As explained earlier, we consider PSA as related but clearly distinguishable from satisfaction with the work environment. This is

Table 1
Descriptive statistics for the (in) dependent Variables: Frequencies, Means, Standard Deviations, Source.

	N	Mean	S.D.	Min	Max	Source
Individual						
Perceived societal appreciation	66593	1.94	0.81	1	4	TALIS (TQ)
Female (dummy)	66593	68.86%		0	100	TALIS (TQ)
Master's degree (dummy)	66593	59.24%		0	100	TALIS (TQ)
Teaching experience	66593	16.88	10.79	0	58	TALIS (TQ)
Full-time (dummy)	66593	81.87%		0	100	TALIS (TQ)
Permanent contract (dummy)	66593	82.57%		0	100	TALIS (TQ)
First choice (dummy)	66593	67.62%		0	100	TALIS (TQ)
Extrinsic motivation	66593	10.83	2.09	4.70	15.78	TALIS (TQ)
Intrinsic motivation	66593	12.23	2.13	2.40	16.13	TALIS (TQ)
Out of subject teaching	66593	0.37	1.08	0	11	TALIS (TQ)
Teacher self-efficacy	66593	12.69	1.93	2.02	19.22	TALIS (TQ)
Job satisfaction	66593	12.00	2.05	3.69	16.10	TALIS (TQ)
Satisfaction with salary	66593	2.21	0.81	1	4	TALIS (TQ)
School						
% students from socio-economically disadvantaged homes (indicated on a 1-4 scale)	4307	2.51	0.93	1	5	TALIS (PQ)
Country						
Starting salary ($. PPP adjusted)	25	31.397.79	10089.28	12107.33	49481.78	OECD (EAG)/Eurydice
Satisfaction with salary	25	2.20	0.31	1.46	2.78	TALIS (TQ)
Competitive exam	25	0.40	0.50	0	1	OECD (PISA)/Expert Survey
% Master's degree	25	54.35	32.58	7.89	100	TALIS (TQ)
Out of subject teaching	25	0.39	0.15	0.16	0.79	TALIS (TQ)
PISA score Science	25	491.27	26.67	420.45	532.44	OECD (PISA)
PISA score Maths	25	490.58	27.04	428.34	526.42	OECD (PISA)
PISA score Reading	25	493.01	28.72	425.49	538.39	OECD (PISA)

Note: TQ = Teacher Questionnaire; PQ = Principal Questionnaire; EAG = Education At a Glance.
All variables were uncentered.

Table 2
Results multilevel regression analyses of individual-, school-, and country level predictors on perceived societal appreciation among teachers (Standardized regression coefficients).

	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Individual												
Female (dummy)		-0.06***	-0.06***	-0.06***	-0.06***	-0.06***	-0.06***	-0.06***	-0.06***	-0.06***	-0.06***	-0.06***
Master's degree (dummy)		-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***
Teaching experience (school mean centered)		-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**	-0.01**
Full-time (dummy)		-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***
Permanent contract (dummy)		-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***
First choice (dummy)		0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
Extrinsic motivation (school mean centered)		0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***
Intrinsic motivation (school mean centered)		0.03***	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***
Out of subject teaching (school mean centered)		0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***
Teacher self-efficacy (school mean centered)		0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
Job satisfaction (school mean centered)		0.10***	0.10***	0.10***	0.10***	0.10***	0.10***	0.10***	0.10***	0.10***	0.10***	0.10***
Satisfaction with salary (school mean centered)		0.24***	0.24***	0.24***	0.24***	0.24***	0.24***	0.24***	0.24***	0.24***	0.24***	0.24***
Participation school policy (school mean centered)		0.07***	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***
School												
%students from socio-economically disadvantaged homes			-0.01*	-0.01*	-0.01*	-0.01*	-0.01*	-0.01*	-0.01*	-0.01*	-0.01*	-0.01*
Country												
Starting salary ($, PPP adjusted)				0.02								-0.03
Satisfaction with salary (country mean)					0.13+							
Competitive exam (dummy)						0.03						0.04
%Master's degree (country mean)							-0.11					
Out of subject teaching (country mean)								-0.01				
PISA score Science									0.14+			.016+
PISA score Maths										0.12		
PISA score Reading											0.09	
Teacher N	66,593	66,593	66,593	66,593	66,593	66,593	66,593	66,593	66,593	66,593	66,593	66,593
School N	4,307	4,307	4,307	4,307	4,307	4,307	4,307	4,307	4,307	4,307	4,307	4,307
Country N	25	25	25	25	25	25	25	25	25	25	25	25
Variance at the individual level	0.53	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Variance at the school level	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Variance at the country level	0.12	0.11	0.11	0.11	0.10	0.11	0.11	0.11	0.10	0.10	0.11	0.10
ICC school	2.5	3.4	3.4	3.4	3.5	3.4	3.4	3.4	3.5	3.4	3.4	3.5
ICC country	17.4	18.9	19.0	18.9	17.0	18.9	18.0	19.0	17.3	17.9	18.3	17.0
R^2 tot (%)		10.63	10.62	10.67	12.75	10.73	11.65	10.63	12.41	11.81	11.37	12.68

Note: Significance levels: + $p \leq 0.10$.; * $p \leq 0.05$.; ** $p \leq 0.01$.; *** $p \leq 0.001$.

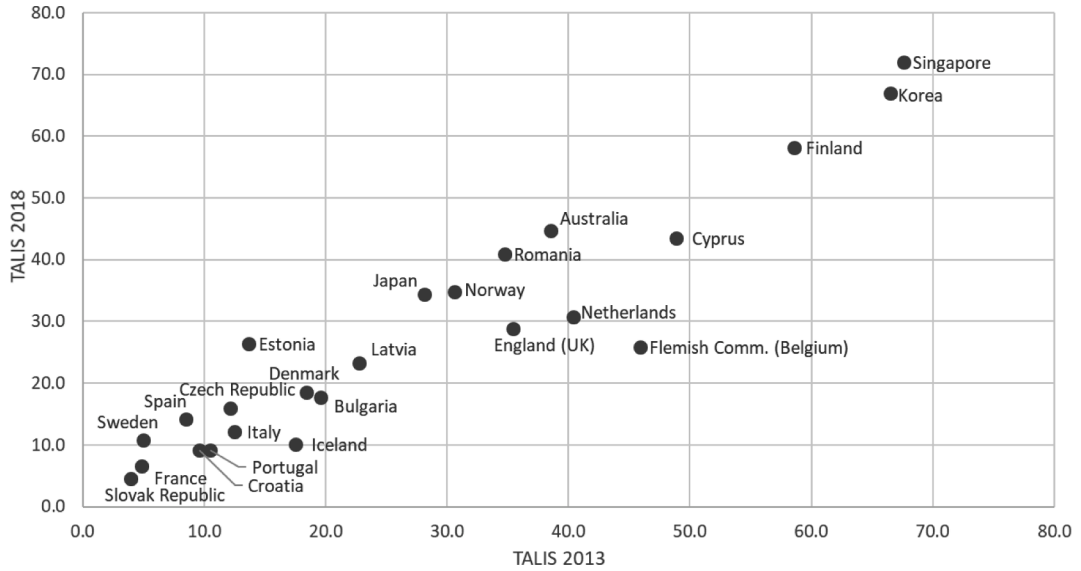

Fig. 1. Percentage teachers who (strongly) agrees that the teaching profession is valued in society in 2013 and 2018.
Note: Slovenia and USA did not participate in 2013.

confirmed by the empirical correlation (Pearson's $r = 0.20$; $p < 0.001$). As expected, teachers who feel their work is valued in society indicated that they would again choose the teaching profession if they could start their careers' over (Pearson's $r = 0.22$; $p < 0.001$). Feelings of societal valuation correlated only very weakly with different measures of teacher efficacy (Pearson's r's: < 0.06; p's < 0.001). These observations support the starting point of this study, namely that PSA cannot be reduced to the more traditional measures of satisfaction/efficacy and hence deserves to be studied on its own.

4.2. Variation in perceived societal appreciation: a multilevel analysis

In the next step of the analysis, multilevel analyses enabled us to study variation at the micro (individual), meso (school) and macro (country) levels (Table 2). Model 1 included individual level characteristics. PSA was lower among (1) women, (2) those who obtained a master's degree, (3) teachers who had more experience in education, (4) those who worked full time and (5) those who had a permanent contract.

A number of characteristics were positively related to feelings of societal appreciation. Teachers who indicated that teaching was their first career choice, teachers who teach out of subject courses, and teachers who scored higher on one of the motivation scales reported more PSA. Furthermore, teacher efficacy and the opportunity to actively participate in school decisions were positively related to PSA. The most important individual level predictors, however, are satisfaction with the work environment and satisfaction with the salary. These satisfaction measures also partly mediated some of the effects of the other individual level predictors (results not shown). It is difficult to determine the exact direction of the causality between job satisfaction and PSA, and it seems likely that the relationship is bi-directional. As explained before, the main reason to include job satisfaction (as well as the other satisfaction measures) is to make sure that we model the social component of PSA as accurately as possible.

In Model 2, we added the number of pupils with a socially disadvantaged background. As expected, teachers who teach in schools with a more disadvantaged student population reported less PSA. The relationship is weak, but theoretically consistent. The public rarely has an idea of the academic progress of schools and judges schools based on their alleged absolute level of student outcomes. In addition, teachers who work in schools with more socially disadvantaged students are more often confronted with problems which they, as a teacher, cannot easily solve. Typically, it concerns issues of care that are difficult to solve and for which the available means are limited. The frustrations that result from that experience may transform into the idea that a teachers' work is not very much valued in society.

Although we found some interesting and theoretically consistent patterns, the main conclusion that can be derived from Models 1 and 2 is that the strength of the individual and school level predictors is rather limited. That observation corroborates the starting point of this article: as a so-called *semi-profession* teachers are an occupational *group* who share a common view on the perceived societal appreciation for their work. This observation combined with the earlier observed large *between country* differences, renders studying these country-level differences in PSA so interesting.

Because the statistical power was low due to the small number of countries, we first entered each country level predictor separately to the model with the individual and school level variables. Model 11 includes the most parsimonious model with multiple country level predictors.

A first mechanism to assess the empirical support concerns the role of material rewards. We relied on two different indicators. An objective measure that reflected the relative starting salary of teachers in a country and a subjective measure that reflected the

aggregated satisfaction with salaries among teachers in a country. Only for the latter did we find a statistically significant relationship: in countries where teachers are more satisfied with their salary feelings of societal appreciation were also higher.

A second mechanism relates to gate-keeping practices. Here, we also relied on three indicators, namely (1) whether there is a competitive entrance exam for teacher training, (2) the proportion of teachers who hold a master's degree, and (3) the level of out-of-subject teaching. Each measure reflected different gate-keeping practices concerning access to the teaching profession. For none of them did we find a statistically significant relationship with feelings of societal valuation for teachers' work.

A third mechanism refers to the average test performance of a country. Regardless of what PISA outcome – science, reading, mathematics – was used, the observed patterns were very similar. In countries where higher PISA scores are obtained, PSA levels were higher ($0.09 < \beta < 0.14$ in Models 8-10), however the effect parameter was only statistically significant for science. To assess the robustness of these patterns, we ran two series of robustness checks. First, we re-ran the analyses with all individual-level variables centred on the grand mean and the average PISA result over the last three PISA cycli (2009-2015). These results again showed that only for science we found a significant effect parameter, although the parameter estimates for mathematics and reading were of very comparable strength (for both: $\beta < 0.11$). Second, we also performed analyses based on a sample that included data from Singapore and the US (see Supplementary File Table S2).[3] These analyses led to the same substantial conclusions and showed stronger and significant effect parameters for *all* PISA indicators ($0.15 < \beta < 0.21$).

To push the analysis one step further, we subsequently assessed whether a *change* in PISA outcomes predicted a *change* in the feelings of perceived societal appreciation (Table 3). At the time of the TALIS field work (spring 2018), the PISA 2015 results were the most recent publicly available PISA dataset. Changes in PISA outcomes can be studied for three outcomes (science, reading and mathematics), for different (longer/shorter) observation periods (2003, 2006, 2009, 2012 vs 2015) and in different ways (changes in scores, rankings). We distinguished 20 different ways to reflect a variation in PISA scores. By relating them all to the change in appreciation, we achieved a comprehensive view on the relevance of a within-country change in PISA outcomes with a within-country change in PSA. Table 2 leads to a clear conclusion: for *all* cases a decrease in PISA outcomes was associated with a decrease in PSA between 2013 and 2018. The mean correlation equals 0.29 and was strongly suppressed by two very low correlations. 14 out of 20 correlations were statistically significant (one-tailed; $p < 0.01$).

5. Discussion and Conclusion

In this article we studied the feeling that teachers' work is valued in society (PSA) among 66,593 teachers in 25 countries from the most recent wave of the Teaching and Learning International Survey. Although teaching is often described as a (semi-)profession and prestige/social standing is always seen as a characteristic of a profession (Ingersoll & Collins, 2018), research that documents teachers' perceived societal appreciation (PSA) remains scarce.

At the *theoretical level*, this paper has argued that studying PSA enables the literature on teachers and teaching to engage with the more general social psychological research tradition. We argued that PSA is part of what social psychologists call collective social self-esteem and directs attention to the social dimension of being a member of an occupation (here: being a teacher). That social dimension may be related but can in no way be reduced to more individual centred subjective evaluations (like job efficacy, job satisfaction). Indeed, the literature on intergroup behaviour even suggests that in some cases (e.g., when people receive criticisms) indicators related to individual *vs.* collective self-esteem may have opposite effects (Long & Spears, 1998). Such observation pleas for considering feelings of societal appreciation (which we consider as an indicator of collective self-esteem) as an independent dimension of the experience of being a teacher. Doing so, we argue, bears the potential to advance long-standing discussion about the evolution of the teaching profession itself. Indeed, although the literature on teaching have seen a growing body of research on topics like teachers' status (Ingersoll & Collins, 2018), intensification (e.g., Ballet et al., 2006) and/or de-professionalization (e.g., Milner, 2013) and this literature has led to valuable insights it also suffers from an important limitation. Indeed, by focussing almost exclusively on 'purely objective' tendencies (e.g., changes in policies related to teachers' rewards, autonomy, and accountability) such discussions may underestimate the independent impact of evolutions and characteristics of the work environment *as perceived* by teachers. Focussing on perceived societal appreciation, is one way to provide an insider view on the teaching profession.

For all these reasons an *empirical* study of the distribution of and differences in perceived societal appreciation is important. At the individual (micro) level we found relationships with other characteristics, as well as a relationship with job satisfaction and satisfaction with the salary. PSA is higher among teachers who considered teaching their first career choice and who scored higher on both intrinsic and extrinsic motivation. Less experienced teachers and women showed lower levels of PSA. Teachers who score higher on self-efficacy and those who actively contribute to school policies feel more valued in society. At the school (meso) level, we found that teachers in schools with more socially disadvantaged pupils more often reported feeling that teachers' work is less valued in society, even though the relationship was weak. In general, however, the main conclusion from the empirical analysis was that despite the considerable number of indicators that were included in the analysis, the proportion of explained variance at the individual and school levels remained low. In our view, this suggests that when assessing PSA teachers do not so much take into account the particularities of their own personal work experiences. This is exactly the pattern one expects when teachers perceive themselves as a 'group' and increase the odds of group-based thinking and behaviour (see further). This becomes even more important because differences *between* countries in PSA are considerable. In some countries, less than 10% (fully) agreed that teachers' work is valued in society, whereas in other

[3] These countries were not included in the analyses due to a lack of data on the starting wages for Singapore and the competitive exam for the United States.

Table 3
Correlations between change in perceived societal appreciation among teachers 2018 vs 2013 and changes in PISA scores, ranking for Science, Mathematics, and Reading.

	Change in perceived societal appreciation among teachers 2018 vs 2013		
	Pearson's *r*	*p**(1-tailed)	N
PISA score Science 15[a]	0.14	0.26	24
PISA score Math 15	0.06	0.39	24
PISA score Reading 15	0.23	0.14	24
Difference in PISA ranking Science 15-12[b]	0.00	0.50	24
Difference in PISA ranking Math 15-12	0.18	0.21	24
Difference in PISA ranking Reading 15-12	0.44	**0.02**	24
Trend in PISA score Science[c]	0.30	0.08	24
Trend in PISA score Math	0.24	0.12	24
Trend in PISA score Reading	0.42	**0.02**	24
Difference in PISA score Science 15-06[d]	0.29	**0.09**	24
Difference in PISA score Science 15-09	0.34	**0.05**	24
Difference in PISA score Science 15-12	0.03	0.45	24
Difference in PISA score Math 15-03[e]	0.31	**0.07**	24
Difference in PISA score Math 15-06	0.28	**0.09**	24
Difference in PISA score Math 15-09	0.36	**0.04**	24
Difference in PISA score Math 15-12	0.22	0.15	24
Difference in PISA score Reading 15-03[f]	0.42	**0.02**	24
Difference in PISA score Reading 15-06	0.37	**0.04**	24
Difference in PISA score Reading 15-09	0.43	**0.02**	24
Difference in PISA score Reading 15-12	0.14	0.26	24
Average growth rate (%) Science[g]	0.31	**0.07**	24
Average growth rate (%) Math	0.30	**0.08**	24
Average growth rate (%) Reading	0.41	**0.02**	24

Notes:
* *p* values in bold are below 0.05.
[a] Official 2015 PISA scores as reported by the OECD.
[b] These indicators reflect the change in ranking between 2015 and 2012. Official PISA scores of 2015 and 2012 were ranked with the highest score ranked as 1. In this way a positive value refers to an increased in ranking between 2012 and 2015.
[c] Average 3-year trend in PISA scores as reported by the OECD. Between-wave changes were modelled based on a linear regression model starting from the earliest available information to 2015.
[d] These indicators reflect the difference in PISA scores for Science between 2006 and 2015; 2009 and 2015; 2012 and 2015. The scores for 2003 are not available for Science.
[e] These indicators reflect the difference in PISA scores for Mathematics between 2003 and 2015; 2006 and 2015; 2009 and 2015; 2012 and 2015.
[f] These indicators reflect the difference in PISA scores for Reading between 2003 and 2015; 2006 and 2015; 2009 and 2015; 2012 and 2015.
[g] These indicators reflect the average trend in PISA scores between PISA waves. The average was calculated by means of the ratios for 2015-2012; 2012-2009; 2009-2006; 2006-2003.

countries this equalled over 70%. Moreover, in a country like Belgium PSA has dropped more than 20 percentage points between 2013 and 2018. How should we interpret such macro differences in PSA and what are their consequences?

The classic literature on social status suggests that societal appreciation at least partly derives from scarcity and inaccessibility (Jasso, 2001). Among teachers we found little empirical support for such a mechanism. For scarcity via economical/material rewards (i.e., relative salary), we only found country differences when we consider a subjective feeling of satisfaction (i.e., the aggregated satisfaction score). For scarcity resulting from gate-keeping practices, neither the existence of a competitive exam, the number of teachers holding a master's degree nor the country-level out-of-subject teaching were related to the notion that teachers' work is valued in society.

We did find, however, a clear and considerable relationship with PISA scores. Teachers in countries that score higher on PISA tests feel that their work is more valued in society. In addition, we also found strong evidence that a *change within countries* in PISA scores predicts a *within country trend* in levels of PSA: a decrease in PISA scores correlated with a decrease in PSA among teachers. This conveys an interesting observation, but more discussion is required regarding its interpretation and implications. At first sight, one could argue that these findings suggest that the easiest way to increase levels of PSA among teachers is to increase a country's performance on PISA tests (Schleicher, 2018). Such reasoning, however, neglects two crucial elements. First, the question as to how PISA results affect PSA. Second, the potential effects of collective social esteem which comprises PSA, among other things. We elaborate on both elements below.

The starting point of this article was that aspects of intergroup relationships and social identity are always a matter of communication and social interaction. A key proposition in school effectiveness research is that schools and teachers should be judged based on their *added value.* Students' learning gains, however, often remain unknown. They are only seldom measured (PISA measures absolute test performances) and in public debates absolute test scores are taken as the critical reference point. This implies that teachers who work in schools with more pupils with a socially disadvantaged background or in countries for which an authoritative institution, like the OECD, says that educational performance is low may feel held responsible by the public at large (Dolton et al., 2018). Indeed, the combination of (1) representing teachers as the most important factor for successful education, (2) teachers who

were attracted to the profession in order to make a difference in the development of children, and (3) creating a 'sense of urgency' by inducing a crisis mentality about the quality of education has consequences which may not be intended, but are no less real or effective.

The OECD's communication about PISA results is always very much aimed at creating a 'sense of urgency' and often leads to a sensationalised way of reporting assessment outcomes (Klemenčič & Mirazchiyski, 2018). Labaree (2014, p. 1) summarises this strategy as follows: "We need such a ranking both to honour the high performers and to shame the laggards, motivating the latter to rise up in the rankings by emulating their betters". Such naming and shaming appear to be a central characteristic of the way educational results are communicated and, in many countries, leads to 'PISA shocks' (Piro, 2019). Indeed, research shows that PISA results receive more media attention when a country performs low on the tests (Grek, 2009). One may wonder whether such a strategy will prove to be effective in the long run. One could see the lowering of PSA due to the way (decreasing) PISA scores are discussed in the public sphere as a kind of 'collateral damage'; a negative side effect that one accepts in order to address a more fundamental problem (i.e., a decrease in educational quality). The problem with that reasoning, however, is that a vast body of experimental research shows that collective self-esteem has clear independent effects. More specifically, research shows that people who are low in collective social esteem, develop the strongest outgroup bias (Long & Spears, 1998). Translated to the teaching profession, an openness for feedback, change and innovation from non-teachers risks becoming blocked, attrition tends to be increased (we found a positive correlation between PSA and the intention to again choose the teaching profession), and attracting new teachers may become more difficult (Han, 2018). At this point, our findings align with the observations of Santoro (2011) and Glazer (2018) who argue that in some cases leaving the profession may be an 'act of resistance' rather than a lack of commitment to the profession. More specifically, they show that among invested leavers (i.e., seasoned and tenured teachers) the decision to leave is informed by an experience of (threatening) tension between a commitment to a certain kind of teaching (craft conscience) and the loss of curricular control due to de-professionalisation, standardisation and the intrusion of testing. The seasoned teachers described by Santoro (2011) and Glazer (2018) did not leave the teaching profession because they were not good in their job, did not like teaching or because exogeneous factors attracted them to another profession. They left because they believed it was no longer possible to act as a professional and refused to function in such work environment. It is precisely at this point, that the importance of teachers' *subjective experience* becomes clear. Indeed, although in objective terms the teaching profession may at best be a semi-profession, a key characteristic of teachers' work is the multitude of actors that comment on and evaluate teachers' work. Very often these comments diverge from or even contradict each other – the responses they receive from their pupils differ from those provided by parents, schools and educational policy. It is exactly that feature which renders it for teachers important to develop a strong view on what good teaching consists of, that is, a craft conscience. Craft conscience is not an individual attitude but refers to a shared ethical understanding of the teaching profession. Such shared understanding is a crucial part of a society identity (Brown, 2000). All in all, then, we argue that PSA and craft conscience are closely related. One cannot have the latter, without rendering teachers more sensitive to the former.

The preceding arguments in no way imply that concerns about educational quality should be downplayed. What it does suggest is that the way in which we discuss these concerns in the public sphere may constitute an obstacle in finding a solution. If so, inducing a crisis mentality about educational quality risks accomplishing the exact opposite than what one aims for.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.ijer.2021.101833.

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