TEACHERS' SCHOOL EXPERIENCE. A RESOURCE TO IMPROVE LEARNING

L'ESPERIENZA SCOLASTICA DEGLI INSEGNANTI. UNA RISORSA PER MIGLIORARE L'APPRENDIMENTO

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ABSTRACT
In a rapidly evolving society, educational system is called to face with new challenges. Knowledge became a participatory and shared construction of meanings for efficiently and flexibly adapting to context demands. Self-regulation is a key skill for a teacher who wants to critically analyse educational action to contribute to the continuous improvement of teaching processes. Present research explores teaching practices starting from the teaching point of view.

In una società in rapida evoluzione, il sistema educativo deve affrontare nuove sfide. La conoscenza diviene costruzione partecipativa e condivisa di significati per adattarsi in modo flessibile alle richieste dell'ambiente. L'auto-regolazione è una competenza chiave per un insegnante che voglia analizzare criticamente l'azione educativa per contribuire al miglioramento continuo dei processi di insegnamento. La ricerca esplora le pratiche didattiche partendo dal punto di vista dei docenti.

KEYWORDS
Self-regulation teaching; feedback; teaching-learning processes.
Insegnamento autoregolato; feedback; processi di insegnamento.

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Introduction

The uncertainty and complexity of a rapidly evolving society also affect the educational system, which must continuously reinvent itself to open up new and unprecedented spaces of possibility (Kuhn e Weinberger, 2005; Brown & Coles, 2012). Every individual acquires knowledge in the same moment they act in the world, and through this action, they redefine, organize, and consolidate knowledge in light of situational elements (Langer, 1975; 1989; Ross et al., 1975; Hattie & Timperley, 2007; Brown & Coles, 2012), adapting flexibly and strategically to the demands of an increasingly volatile and uncertain context (OECD, 2014, 2018; TALIS, 2018). Education is not merely about acquiring pre-established knowledge but requires the participatory and shared construction of meanings that emerge through interaction and reciprocal exchange among all resources present in the school environment and its external surroundings (Colliva, 2014; Damiano, 2009). Teachers represent a valuable resource for ensuring that this shift in perspective becomes truly effective (Schmidt and Datnow 2005; Hattie, 2009). A teacher's mastery lies in their ability to go beyond professional techniques, continuously questioning and refining practical knowledge rooted in educational experience (Perla, 2010, 2011). Diagnostic and planning skills, observational and reflective competencies form part of a self-regulated teaching approach, enabling deliberate actions and critical analysis of professional practice (Brown & Coles, 2012; Viganò, 2016).

Although self-regulation has been highlighted as an important part of a teacher's role in the school experience (Tricarico & Yendol-Hoppey, 2012), the self-regulatory processes of teachers are still unknown. Available research has focused on variables associated with promoting or enhancing self-regulation in students, and not on the level of self-regulation of the teachers themselves (Dignat & Büttner, 2018). Moreover, the only available evidence in this direction adopts a qualitative approach (Uzuntiryaki-Kondakci, 2017), which investigates, for example, the knowledge of this competence (Spruce & Bol, 2014) or the related epistemological beliefs (Lawson et al., 2018).

This study aims to reduce the theoretical and empirical gaps regarding teachers' self-regulation by combining a phenomenological-exploratory approach with a quantitative methodology. A self-report questionnaire explores the teacher's instructional practice in terms of beliefs, attitudes, and reported enacted practices (Clark & Peterson, 1986; Nespor, 1987; Perla, 2010). These dimensions are

operationalized through indicators that are as objective and measurable as possible and are subjected to a preliminary validation phase to test their validity, reliability, and factorial structure.

Positive beliefs about self-regulation do not always result in the implementation of self-regulated teaching strategies. Investigating opinions on a given subject is not enough; it is necessary to examine how frequently specific behaviours are actually enacted. This process requires self-reflectivity—reconsidering, reconstructing, and deconstructing one's professional actions to provide an overview of habitual teaching practices. This data collection method aims to bridge the gap between self-administered scales that ghater opinions and direct observation, which only captures specific and limited moments.

This research may benefit from collaboration with Invalsi, the National Institute for the Evaluation of the Education System. Through the National Surveys, the Institute annually provides useful information to policymakers for assessing the national education system, as well as to individual school institutions for self-assessment. It is essential to understand how the information derived from these tests is effectively integrated into teaching practices.

1. Theoretical framework

Just as self-regulation helps students take responsibility for their own learning, it can also be expected to help teachers in their own professional development. Teachers have to constantly deploy many strategies to achieve teaching goals (Ali & Yasmeen, 2019)

Self-regulated teaching is defined as the process through which teachers actively and consciously monitor, regulate, and control their professional actions from cognitive, metacognitive, emotional, motivational, and behavioral perspectives (Shunk, Zimmerman, 1998, 2001; Boekaerts et al, 2000; Pintrich, 2000; Persico, 2022) in order to select the most effective instructional strategies to achieve a given educational objective. This involves the ability to observe and monitor the teaching environment so as to adjust professional actions in light of the available resources and the relevant situational characteristics (Goodwin, 1994; Pintrich, 2000; Sherin, 2014; Karlen et al., 2020).

The most consolidated theoretical model for explaining how self-regulation intervenes in teaching-learning processes is Zimmermann's cyclical three-phase

model (1998; 2008). According to this model, teaching practice unfolds through three cyclically repeating phases: Forethought, Performance and Self-Reflection.

In the forethought phase, objectives are defined and the most appropriate strategies for achieving them are selected. Task analysis is fundamental to identifying significant characteristics; however, choices are inevitably influenced by individual factors such as perceived self-efficacy, expected outcomes, and motivation to pursue the objectives.

In the performance phase, the selected strategy is implemented while being concurrently observed to determine whether it is functioning adequately or requires modification. Self-control and self-monitoring are essential components for effectively managing the available resources in terms of effort, commitment, and direction toward the goal.

The self-evaluation phase involves formulating a summative judgment of the entire process, taking into account all factors contributing to both success and failure, as well as the emotional components. The insights gained in this phase will determine subsequent choices regarding objectives, tools, and strategies for future actions.

Self-evaluation appears as the continuous link in a cyclical process that recurrently returns to itself to question actions and assess their effects: teaching practice, in this sense, is never definitive but is continuously refined based on what is experienced within the classroom setting.

This model clearly exemplifies how teaching efficacy relies on the construction of stages, processes, and components that interact and integrate with each other, producing positive learning (Werner & Werner, 2020) and teaching outcomes (Ali & Yasmeen, 2019). There is still little evidence specifying the interactions and relationships among the various components involved in teachers' self-regulated processes. Therefore, Zimmermann's model enables the operationalization of teaching practices, facilitating the identification of variables that can contribute to shaping self-regulatory competence.

In a process rooted in action yet simultaneously seeking to transcend it—in a metacognitive effort aimed at understanding not only "what to do" but also "how to do it"—feedback represents an indispensable resource for interrogating the external context. It is corrective information regarding the action undertaken, which enables future actions to be directed so as to reduce the discrepancy between the current state and the expected state (Hanser & Muchinsky, 1978; Ashford & Cummings, 1983). The school environment becomes an informative one to the extent that the teacher is able to extract relevant information regarding the

pertinence of the established educational objectives (signal function of feedback, Vroom, 1964), the appropriateness of the employed instructional strategies (feedback as reference information, Greller & Herold, 1975), and their effectiveness (feedback as evaluative information, Greller & Herold, 1975). A self-regulated teacher exercises metacognitive control that allows constant awareness of why, where, when, and how to apply specific knowledge in order to achieve a performance that is aligned with the defined educational objectives (Sáez-Delgado et al., 2022).

Being aware of the distinctive characteristics of the environment in which one works is the first step to effectively respond to the demands that arise from it, coherently modulating one's actions and interpreting any moments of uncertainty as challenges to be faced rather than obstacles to be eliminated (Weick & Sutcliffe, 2001, 2008; Mangano, 2017). What truly makes a difference is the active role played by the individual in exploring the context, carefully selecting incoming information, and then reconstructing, organizing, and applying the acquired knowledge in the manner most suitable to their needs (Hattie & Timperley, 2007). The strategies for gathering the information useful to evaluate and perfect one's professional actions can be grouped into two broad categories: monitoring—manifested in a reflective dimension (attending to the reactions of others to one's behavior) and a comparative dimension (comparing one's behavior with that of others)—and investigation, understood as the creation of spaces for discussion with others (Jones & Gerard, 1967). The choice to engage in active feedback seeking, and the decision regarding which strategy to adopt, will vary according to how multiple contextual factors combine (e.g., established expectations, the amount of available information), previous experiences (mastery experience), the motivations driving the individual (e.g., improving performance or managing the impression he/she wishes to convey to the workgroup), and expectations for future performance. In line with the principles upheld by educational policies, another potentially useful strategy for informing professional actions and enhancing school practices is the use of educational system evaluation tools (Stronge & Tucker, 2003; Flores, 2010, 2012; Delvaux et al., 2013; OECD, 2013; Eurydice, 2015). The opportunity to make use of such instruments must consider the meaning attributed to them by teachers and by the establishment in which they serve: the notion of evaluation as an opportunity for reflection rather than as a value judgment is the prerequisite for being able to discuss the outcomes effectively.

2. Present Study

Research context and questions

Continuous improvement of teaching-learning processes would not be possible if teachers did not engage to implementing innovative teaching practices within the classroom system (Hattie, 2009; Schmidt and Datnow, 2005; TALIS, 2018). It is necessary to move beyond mere professional technique towards a masterful approach that recursively questions the practical knowledge derived from one's educational experience in order to monitor learning and adjust teaching pathways in pursuit of appropriate teaching objectives (Perla, 2010; 2021). Self-regulatory competence is crucial insofar as it allows for the modulation of one's actions based on what occurs in response to them in the external environment (Persico, 2022; Hattie & Timberley, 2007; Zimmermann, 1998). In general, it appears that teachers hold positive beliefs about self-regulation, yet in practice they are reluctant to modify their lessons (Stockero and Van Zoest, 2013; Yetkin Özdemir et al., 2020; Gurel et al., 2022) and prefer to strictly adhere to protocols in order to feel more confident in planning, organizing, and executing the activities necessary to achieve educational objectives (Barni et al., 2019; Sáez-Delgado, 2022). This tendency is even more evident among novice teachers who, being unfamiliar with the school environment, feel more at ease rigidly following the lesson plan to complete it as intended and within the designated time, rather than experimenting with innovative strategies that would allow them to adapt flexibly to situations (Borko and Livingston, 1989; Westerman, 1991).

The present research examines the variables that, in various respects, may play a role in self-regulated teaching, influencing the teacher's ability to act deliberately and critically analyse their own professional practice.

> *Q1: To what extent does self-regulation come into play teachers' instructional practices?*

To answer this general question, the school experience is framed within Zimmermann's theoretical model of self-regulation. Each of the three phases described by the author (Forethought, Performance and Self-Reflection) is operationalized into specific teaching practices in order to understand both the importance and the degree of space allocated to this competence in classroom activities.

Feedback represents an indispensable resource for defining, monitoring, and refining professional actions in light of a specific educational objective. The more the feedback is considered convincing, relevant, valuable, and supportive, the more likely it is to be accepted and used for improvement (Altrichter & Kemethofer, 2015; Behnke & Steins, 2017; HMIE, 2010; Verhaeghe et al., 2010).

Q2: How frequently do teachers use feedback to modulate their professional practice?

The positive effect of feedback on both teachers' performance and motivation has been widely confirmed (Tschannen-Moran & McMaster, 2009; Morris & Usher, 2011; Hattie & Timperley, 2007). The aspect to be emphasized is the active and conscious exploration of the school environment: the teacher does not simply respond to a predetermined set of information but intentionally selects the contextual elements that are most relevant to their objectives. Depending on their needs, they will choose to adopt specific information-seeking strategies over others based on the evaluation of the effort required to obtain the information, the risks associated with the feedback, and the quantity and type of inference involved. In general, the rule is that the value of the information obtained must exceed the cost incurred in obtaining it (Atkin, 1973), which is why low-cost strategies are initially employed, moving on to more demanding ones only if the primary strategy fails to generate adequate feedback (Ashford & Cummings, 1983).

Q3: What strategies are used to examine one's professional actions?

Q4: Do teachers actively seek feedback?

Q5: What type of 'corrective information' do they rely on?

Particular attention is given to the National Invalsi Surveys, an evaluation tool for the education system designed to promote the continuous improvement of education quality (Eurydice, 2015; OECD, 2013). Standardized tests are part of a broader school evaluation system that has been reformed at the national level to support the continuous improvement and innovation of the educational system. These tests are administered annually to evaluate the level of learning in some fundamental competencies in Italian, Mathematics and English. The results provide useful insights for evaluation at the classroom, school, regional, and national levels.

Q6: To what extent do teachers know about and approach the Invalsi Surveys positively?

Q7: What association exists between the actual use of Invalsi feedback and its potential use as perceived by teachers?

The use of data obtained annually from standardized tests is linked to the school's attitude toward evaluation as well as to teachers' subjective perceptions of it. In general, teachers tend to show an unfavorable attitude towards "external" evaluation systems, especially when these are experienced as an authoritarian pressure to meet specific performance standards (Matthews & Sammons, 2004; Ehren, Perryman et al., 2015; Hofer et al., 2020). The resistance that has emerged over the years against these "external" evaluation systems is rooted in multiple motivations—sometimes related to contingent and operational factors (e.g., difficulties in carving out time for test administration), sometimes ideological and cultural (e.g., evaluation criteria based solely on performance rather than on the overall educational pathway), and other times political (e.g., fear that teachers themselves might be subjected to evaluation). In all cases, this resistance stems from a poor understanding of how the tests are actually structured and the objectives they aim to pursue. The questions contained in the tests assess the ability to reason about real-life issues or problems, to use the knowledge acquired, to interconnect different pieces of information, and to apply them to new challenges. The results indicate the level of competence reached, but they cannot explain why that level was achieved: they are not used for evaluating individual students—a prerogative that remains exclusively with the teacher—nor do they serve to assess teachers' work, and no reward or penalization mechanism for schools or teachers is tied to the test outcomes. Instead, they provide an additional resource for the school to understand where to direct future efforts and to better grasp issues such as school dropout, gender differences, the inclusion of foreign students, or the "school effect," that is, the contribution of the school to changes in students' competence levels. Increased awareness of these aspects has, in recent years, progressively reduced resistance barriers, as demonstrated by the increased test participation rate (INVALSI, 2024). What remains to be understood, however, is how teachers use the information derived from these tests as a valuable resource to adjust their teaching practices.

School environment is an informative one (Hanser & Muchinsky, 1978). The pressure to meet specific objectives and quality standards established by the school

increases the likelihood that actions will be taken to comply with them, triggering strategic behaviors aimed at eliminating the threat as quickly as possible instead of confronting it as a potential opportunity for growth and improvement (Ehren, Gustafsson et al., 2015; Altrichter & Kemethofer, 2015; Ehren, Jones et al., 2016; Jones et al., 2017).

Q8: To what extent do contextual variables affect self-regulation?

In general, the "institutional" factors that most significantly influence the capacity for improvement are favorable attitudes toward evaluation, teachers' participation in the decision-making process, and the availability of resources and knowledge that support improvement (Ólafsdóttir et al., 2022). Equally important are the teachers' subjective perception of the school context and their level of motivation (Spillane et al., 2002; Allen & Penuel, 2015; Stollman et al., 2022; Sáez-Delgado et al., 2022): perceiving greater involvement in decision-making and increased collaboration could mitigate the impact of potential obstacles to change, such as a lack of time, support, knowledge, or resources (Ólafsdóttir et al., 2022).

Measures

The aforementioned issues represent the guiding framework within which the research project is conducted. Teachers' self-regulatory competence is investigated through a phenomenological–exploratory study that begins with the educational experience of each participating teacher. The adopted methodological design seeks to account for the complexity of the subject: a self-report questionnaire gathers the "voice of the teachers," exploring their beliefs, attitudes toward teaching, and descriptions of the practices they have implemented (Clark & Peterson, 1986; Nespor, 1987; Perla, 2010).

There are three constructs under investigation, operationalized according to the literature. The first dimension - school experience - examines the representation that teachers have of the school environment in which they served during the academic year preceding the administration. Using 11 items on a 5-point Likert scale, the questionnaire investigates the degree of agreement or disagreement of the participants regarding: the definition of expectations (clarity and understanding of the priority objectives and evaluation criteria established by the school); the degree of involvement and professional autonomy experienced; and the level of collaboration and mutual exchange promoted by the school. This section concludes

with an exploration of the overall level of satisfaction related to the work climate experienced at various levels (in relation to the school principal, colleagues, and students).

The second dimension - teaching practices - explores the frequency with which a series of teaching strategies are implemented that engage self-regulatory competencies as outlined in Zimmermann's three-phase cyclical model. Accordingly, 10 items on a 5-point Likert scale investigate the extent to which participating teachers: 1. set objectives and design instructional pathways based on available resources and the needs expressed by students; 2. monitor the implementation of their teaching actions to verify their effectiveness; and 3. actively seek information to critically analyse what has been done and understand what was effective and what needs to be modified.

The third dimension - perception of educational system evaluation - examines teachers' attitudes toward the evaluation system, with specific reference to the Invalsi national surveys. Respondents are first asked to indicate the frequency with which they had the opportunity to engage with these tests at various levels during the academic year preceding the administration (6 items). Subsequently, the questionnaire explores both the actual use and the "ideal" use of strategies that enable teachers to self-regulate their teaching actions in light of corrective information derived from the results reported by Invalsi (8 items + 8 items, presented in parallel). Finally, respondents are asked to report their level of knowledge—and, if applicable, their corresponding level of satisfaction—regarding specific aspects related to the National Surveys, thereby providing corrective feedback that Invalsi could take into account to improve its work.
At the end of the questionnaire, a series of socio-demographic variables are collected to investigate potential relationships with the theoretical constructs examined: gender, age, educational qualification, years of teaching experience, the employment relationship with the school under analysis and the corresponding years of service; the level of education at which the profession is practiced, the average class size, and the average number of students taught. In addition, information on the subject taught and the region of reference is gathered with a view to a subsequent line of inquiry that aims to anchor the results emerging from this study with the related outcomes derived from the Invalsi Surveys.

To minimize bias related to social desirability—a common issue with self-administered questionnaires (Little, Goe, & Bell, 2009; van de Vijver & He, 2014)—

the items and their corresponding response formats have been operationalized as precisely as possible: observable frequency indicators have been preferred over response formats that measure the degree of agreement or disagreement, with the latter being used only in cases where an opinion is explicitly sought rather than a factual account.

The instrument is currently in the validation phase on a sample of 20 comprehensive schools, evenly distributed throughout the national territory and across the five geographical macro-areas considered in the analysis of the results. Random sampling method has ensured that the group is representative of the overall reference population. School principals have been contacted and informed about the main objectives of the research. Participant consent is being progressively obtained so that the subsequent administration can take place via an access link that will allow the questionnaire to be completed online.

Participants and procedure

The study targets teachers in primary and lower secondary schools. Among these levels of education, there appears to be greater continuity in the teaching strategies employed, that are focused more on classroom management than on teaching processes. By investigating their educational experience, researchers seek to identify the variables capable of promoting a greater use of higher-order skills (critical thinking, problem solving, decision making) through which knowledge is continuously evaluated, integrated, and applied to the relevant context. (Lipowsky et al., 2009).

To ensure the representativeness of the target population and a uniform distribution across the national territory, will be adopted a simple random sampling without replacement (SRSWOR), a probabilistic sampling design that guarantees every possible sample of units has equal probability of being selected.

During the validation phase, the schools located in the capitals of Italy's twenty regions represented the reference population. This choice was made to ensure adequate national territorial coverage while simplifying the operational management of the data collection activities. Twenty schools (one for each regional capital) were selected, primarily comprehensive schools whose large number of classes guarantees a greater availability of observable units within each school. For each school selected in the main sample, a substitute was also identified to be activated in case of withdrawal or inability of the primary school to participate. The

substitutes were likewise selected from the same reference population, according to the criteria mentioned above.

Regarding the procedure for involving the schools, the researcher will first contact the school principal to obtain their willingness to participate in the study, after having been adequately informed about the main objectives of the investigation. Following an affirmative response, a link will be sent through which participants can complete the self-administered questionnaire online. Teachers from participating schools will be invited to join the study on a voluntary basis after being informed about its objectives.

The online administration of the questionnaire presents several advantages and limitations that should be taken into account in the overall evaluation of the research. On one hand, this method potentially allows for a large sample size (Reis & Gosling, 2010); on the other hand, it poses the risk of sampling bias (Van Selm & Jankowski, 2006), since not all groups may have the same level of Internet access and, within the same sample, not all age groups may possess equivalent skills in using the available tools (Van Selm & Jankowski, 2006). The low intrusiveness of the survey and voluntary participation may enhance the spontaneity and authenticity of responses, allowing respondents to express their opinions freely (Ricolfi, 1996); however, the lack of direct interaction with the researcher might also lead to greater demotivation, thereby compromising the validity of the collected data (Smith, 2000). Furthermore, while the mediation by school principals is necessary to obtain consent for participation, it automatically precludes the possibility for teachers whose respective principal does not grant approval.

3. Expected Results

This investigation aims to contribute to an innovative educational approach in which knowledge and action interact synergistically and mutually enrich each other through a reflectivity that interrogates experience in order to extract useful insights for reflecting on and, if necessary, modifying one's teaching practice (Vertecchi, 1976; Viganò, 2016; Perla et al., 2021). Self-regulation is a crucial competence in the educational context and must be understood within the multitude of factors that can influence it: personal characteristics of teachers (e.g., teaching experience, subjective representation of the school environment), class characteristics (e.g.,

size), and elements of the school institution (e.g., approach to instructional improvement) combine each time in a unique and original manner.

The first phase of the research consists of validating the survey instrument. Validity, reliability, and factorial structure of the survey instrument will be tested. Researcher expects to confirm the presence of three dimensions (school experience, teaching practices and perception of the evaluation of the educational system), which recall and translate into operational terms the core construct under investigation - self-regulation.

Following this validation pre-test, the investigation which is the matter of the research project will be carried out. Previous studies have shown that positive beliefs about self-regulation do not always result in the implementation of self-regulated teaching strategies. It is likely that the individual and contextual dimensions influence each other, determining the way in which the teacher perceives one's profession and the degree of satisfaction with it. For example, it is necessary for the school institution to clearly define the educational objectives and the quality criteria to be reflected in the teaching planning; however, that may not be sufficient: the artistry, the originality of the teacher's actions, likely emerges when these objectives are shared and recognized for their significance. Similarly, it is expected that the level of engagement experienced by the teacher in the school and decision-making dynamics is also important: being in a positive environment that promotes participation, sharing, and collaboration within a climate of mutual trust and respect increases the sense of being an active part of a broader educational system and motivates the teacher to contribute. Regarding the use of data from the INVALSI surveys, it is necessary to understand how the information obtained from the tests is effectively integrated into teaching practice. Literature highlights the importance of the school's attitude toward evaluation, as well as teachers' subjective perceptions of it. Presumably, the degree of knowledge and the related satisfaction regarding the overall management of these data could help explain the association between the ideal utility of "external" evaluations and the effective implementation of improvement actions based on them. In addition, the context could intervene at various levels, for example by promoting formal and informal discussion sessions on the results emerging from standardized tests.

The considerations outlined above exemplify the reasoning that led to the construction of the experimental device, following an in-depth literature review.

Empirical research intends to promote an initial form of self-reflectivity: it asks the teacher to rethink one's teaching practice, to deconstruct and reconstruct it; to focus on it and then broaden the perspective in order to offer an overview of the way in which he or she usually acts within their educational environment, rather than just providing a snapshot of a circumscribed and specific moment. This process enables the necessary immersion and distancing to be an integral part of the classroom system while also serving as an observer of the dynamics occurring in it.

The same approach is used by the researcher, who actively and receptively attends to what is happening in order to develop a more nuanced and detailed understanding of the contexts.

To adequately interpret the results of this study, it is necessary to take into account some limitations. Firstly, it is important to consider the "constraints on generality" (COG), so that the results cannot be generalized to groups not represented in the study (Simons et al., 2017). This study focuses on teachers who teach Mathematics, Italian, and English in the fifth grade of primary school and the third grade of lower secondary school.

A second limitation concerns the methodology employed. An empirical and deductive research approach that allows the analysis of real educational situations in order to subsequently derive inferences useful for theoretical formulation (Altet, 2003; Wittorski, 2004; Bru et al., 2004; Damiano, 2006; Perla, 2010). Self-reporting scale, on one hand, allow for space to be given to practical knowledge by acknowledging the complexity of the investigated subject; on the other hand, the responses obtained could be subject to social desirability bias. Literature suggests that teachers' self-assessments do not always correlate with data obtained from the direct observation of teaching practices (Dignath et al., 2018). This discrepancy may be explained by the fact that self-regulatory processes generally reflect teachers' perceptions of their overall and habitual behavior, whereas direct observation captures behaviors at a specific moment. For a more concrete perspective on self-regulation, it would be desirable for studies to simultaneously consider both sources of information - the observations and the perceptions reported by teachers.

Another limitation to consider is the cross-sectional research design. It provides a snapshot of the population at a particular moment but does not allow for tracking changes over time. Given the proven mutability of self-regulation, it would be interesting to study the evolution of this construct throughout the different stages

of a teaching career by employing a longitudinal research design that follows a cohort of teachers from their first year of employment.

Conclusions

Quality of education is a multidimensional concept (Fauth et al., 2014; Scheerens, Hendricks, 2004; Kane and Cantrell, 2010; Kunter and Voss, 2013; Wagner et al., 2013) that can be investigated from different, although largely interacting, perspectives. Moving within the theoretical framework that promotes a "new alliance" between educational research and teaching practice (Damiano, 2006; Perla, 2011), an effort was made to contribute to the enhancement of the school system through teacher professionalism (Montalbetti, 2005). Self-regulation is not an intrinsic, immutable mental ability; rather, it can be learned, trained, and adapted to specific contexts (Boekaerts, 1999; Karlen et al., 2020). In order for teachers to learn to intentionally build, organize, and apply knowledge rather than passively following "ready-to-use" action protocols, they must be equipped with adequate tools for awareness and reflection. Employing a methodological approach that gives voice to teachers provides a valuable entry point into the realm of practical knowledge, as it is perceived and expressed through educational experience. This not only enhances an understanding of teaching from a research perspective but also improves teaching practices through teachers' reflective awareness. An innovative educational system that promotes professional autonomy and a sense of class belonging is being pursued within a positive school environment. In such an environment, teachers are encouraged to contribute to the continuous improvement of teaching and learning processes by emphasizing participation, sharing, and collaboration in an atmosphere of mutual trust and respect. From an operational standpoint, it is necessary to create spaces for reflection and discussion within reference groups: comparing the priority educational objectives; critically analysing what has been done to understand what has been useful and what has been less so; defining together the future actions to be implemented to further progress towards the goal. All actions that nourish one's professional identity, in terms of greater decision-making autonomy and self-regulating capacity, capable of supporting the perception of co-responsibility in the development of society and new generations (TALIS, 2018).

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