

Peer feedback in teacher professional development: A systematic review

El feedback entre iguales y el desarrollo profesional docente: revisión sistemática

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Abstract:

The potential of professional collaboration as a mechanism for teacher professional development (TPD) lies in the feedback opportunities it offers. Although feedback itself has been extensively researched, most studies focus on the teacher-student relationship. In this sense, literature reviews have paid scant attention to teacher-teacher feedback in a symmetrical relationship and its impact on TPD. Consequently, 30 peer-reviewed empirical articles were selected from 2012 to 2022 in accordance with the PRISMA protocol. The process consisted of three phases: document search and evaluation using the VOSViewer tool; selection and filtering of documents according to the defined criteria, and document analysis. The results show that all research on teacher-teacher feedback concludes that it improves learning, the relationship between teaching

partners and school climate. The main difficulty identified relates to teachers' lack of skills in providing quality feedback. Few articles analysed the impact of feedback on teaching and learning methodologies (although all highlighted positive benefits) and even fewer studies analysed its impact on TPD. In turn, recommendations for improving research and practice in schools are proposed.

Keywords: teacher professional development, peer feedback, systematic review, teacher agency, basic education.

Resumen:

El potencial de la colaboración profesional como mecanismo de desarrollo profesional docente (DPD) radica en las oportunidades de retroalimentación que ofrece. El *feedback* ha

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sido ampliamente investigado, pero la mayoría de los estudios se centran en la retroacción que se da en la relación profesor-alumno. En cambio, no se ha encontrado suficiente revisión de la literatura respecto a la retroalimentación profesor-profesor desde una relación simétrica ni se ha analizado su impacto en el DPD. Con base en el protocolo PRISMA, se seleccionaron 30 artículos empíricos revisados por pares de entre los años 2012 y 2022. En concreto, el proceso siguió tres fases: búsqueda de documentos y evaluación mediante la herramienta VOSViewer; selección y filtrado de los documentos bajo criterios definidos, y análisis de los documentos. Los resultados muestran beneficios y dificultades a nivel docente y organizativo. Entre los primeros, destaca que el

feedback favorece el aprendizaje del alumnado, la relación entre las parejas docentes y el clima de centro. La principal dificultad identificada se refiere a la falta de competencia del profesorado para ofrecer una retroalimentación de calidad. Pocos artículos analizaron el impacto del *feedback* en las metodologías de enseñanza y aprendizaje, a pesar de que todos mostraron sus ventajas, y menos aún examinaron su impacto en el DPD. Para finalizar, se sugieren algunas recomendaciones para mejorar la investigación y sus prácticas.

Palabras clave: desarrollo profesional, *feedback* entre iguales, revisión sistemática, agencia docente, educación básica.

1. Introduction

There is ample empirical evidence to confirm that teachers who exchange ideas and teaching practices in a coordinated manner state that they have very high levels of job satisfaction, self-efficacy and better relations with their students (OECD, 2014), elements that make an effective contribution to improving the atmosphere at school. In this context, Lizasoain et al. (2015) show the significant relation that exists between the quantity and quality of feedback among teachers and the way in which they develop innovative and active teaching practices centred on the student learning process. Similarly, Krichesky and Murillo (2018) have suggested that one of the collaborative practices that generates most learning among teachers is joint prob-

lem-solving, “since the practices that are shared, or knowledge that is built, generate a body of information that serves as learning input for the teaching staff” (p. 149). In the same line, Hattie and Timperley (2007, as cited in Wisniewski et al., 2020) show the power of feedback in impacting the learning process.

From the concept of feedback, defined as the “process through which learners make sense of information from various sources and use it to enhance their work or learning strategies” (Carless & Boud, 2018. p. 3), numerous classifications emerge. In terms of its evolution, it is defined as *remedial* (Zimmerman, 2008), *self-regulated* (Nicol & Macfarnale-Dick, 2006) and *dialogue-based*. This last term is the one adopted by Askew and Lodge

(2000). From a “co-constructivist” view of feedback, they describe how it can be constructed from loops of dialogue and information exchanged between colleagues.

The contributions of the numerous studies that we reviewed lead us, on the one hand, to link feedback to self-regulation processes (García-Jiménez, 2015; Garello & Rinaudo, 2013; Rodríguez-Gómez et al., 2013; Sanmartí, 2010); and, on the other, to review the beliefs and perceptions on feedback of those who have provided it (Adcroft, 2011; Doan, 2013; McLean et al., 2014; Yang & Carless, 2013). Specifically, studies analysing the repercussions of feedback among peers (Carless & Boud, 2018; Charteris & Sardon, 2016; Huber, 2013; Van Gennip et al., 2010) agree that feedback should have the following characteristics: it should be bi-directional and dialogic, insofar as it requires co-responsibility and consensus. It should be cyclical, creating learning circles which “oblige” the use of feedback in future tasks, and this means necessarily involving self-regulation processes to facilitate so-called feed-forward (García-Sanpedro, 2012). Finally, it should be adaptable and personalised, meaning that it could be constructed from prior conceptions presented by the teaching staff (Pinya et al., 2020).

A review of the specialised literature shows that feedback has been thoroughly researched but that most of that research is centred on teacher-pupil relations and not enough work has been found on teacher-to-teacher feedback or

analysing its impact on teacher professional development (TPD).

In turn, TPD is defined as a process of growth in teaching practice. It allows developments in actions and understanding, and it goes beyond personal variables and competences to also consider those that become institutional improvements (Chapman et al., 2015; Escudero et al., 2017; Esteve et al., 2011; Silva-Peña, 2007; Shortland, 2010; Todd, 2017). The main benefits offered by research into TPD reveal that the acquisition of a few personal competences is not enough for the practice of teaching, but rather the fact of positioning oneself on the path to a new professionalisation that takes into account both the emerging needs of the students and those of the centre itself, of which they form part (Alam et al., 2020; Bolívar, 2014; Duran, 2019).

This study aims to carry out a systematic review of the literature to examine the empirical evidence of the benefits of feedback among peers for both TPD and institutional development from a symmetrical relationship, since it is understood that learning is rooted in a sociocultural theory of learning (Vygotsky & Cole, 1978) and is defined as the construction of knowledge and skills through interactions among participants of similar status and experience, with none of them acting as “experts” for the others (Topping, 2005).

Focusing on the figure of the teacher and on the analysis of their professional

development, the data collected in the TALIS 2018 report shows that 80% of teachers from OECD countries considered that the continuing training they received which has had the greatest influence on their work is that based on peer collaboration. TALIS, therefore, proposes offering more collaboration-based training to teachers (OECD, 2019).

It is noteworthy that in the last decade the number of studies on peer feedback has increased, while there is growing interest in analysing its effectiveness (Cravens & Hunter, 2021; O'Leary, 2020; Ridge & Lavigne, 2020).

Two systematic reviews relating peer feedback to TPD have been identified in the existing literature (Johnston et al. 2022; Ridge & Lavigne, 2020). In the first study, based in Australia, 19 academic articles focussing on peer teaching evaluation carried out from observation and feedback were reviewed. These projects were categorised into three central domains: organisational level, programme level and individual level, and produced significant findings in terms of improvements in teaching and student learning outcomes at all three levels. The second systematic review explored the role of peer observation and feedback as a vehicle for going beyond evaluation and returning to focus on improvement in teaching practice. This systematic review of the existing literature ($n = 38$ documents, 92% of articles peer reviewed) indicates that peer observation and feedback is a promising practice for improving instruction but that it lacks sufficient

evidence. It encourages policy to promote innovation and research into this practice so that models of peer observation and feedback can be effective strategies for removing the most significant educational barriers. Although most of the previous studies have documented the benefits of peer feedback for TPD, these systematic bibliographical reviews have analysed practices from different models and different educational levels without reviewing the effectiveness of the dialogic feedback model, in which there is a differential condition of reciprocity of roles and symmetry among participants. In that sense, there is currently a lack of clear research-based evidence of the benefits of peer feedback in TPD.

Taking this shortfall into account, the research questions and objective of this study are the following:

1. What are the characteristics of dialogue-based peer feedback research? Map and analyse the characteristics of empirical studies found in the research considering a) the publication context: year, place and educational level; b) the intervention: pair or group; feedback tools; phases and cycles; c) the research project: research design, participants, instruments and research types; evidence offered by the study.

2. How does peer feedback influence teacher and institutional professional development according to the research findings? Analyse evidence of the pros and cons of peer feedback at the teaching and organisational levels.

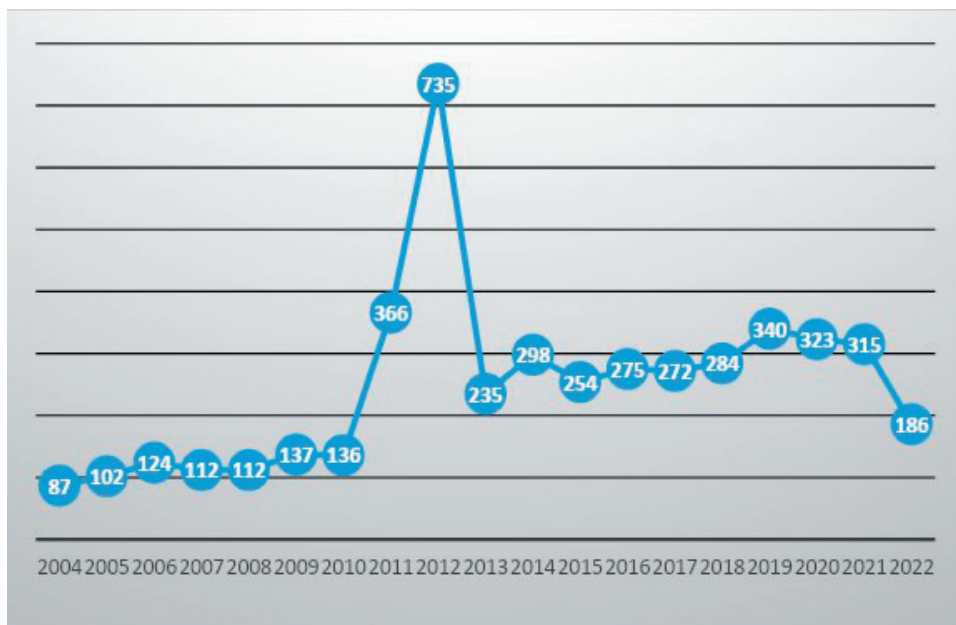
2. Method

To respond to the planned objectives, the research was carried out from an original systematic review of the literature, following the PRISMA protocol (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), which ensures the collection of all the recommended information and the replication of the process (Page et al., 2021). It also promotes the quality of the study by offering a checklist and a flow chart to facilitate the systematisation (Moher et al., 2009).

Specifically, there were three phases: (1) document search and evaluation using the VOSViewer tool, (2) selection and filtering of the documents using the defined criteria, and (3) analysis of the documents (Littell et al., 2008; Petticrew & Roberts, 2006).

With the aim of achieving the most up-to-date information, the review period is defined from 2012, the year which saw a large increase in the number of publications, to 2022 (Figure 1).

FIGURA 1. Result of feedback and TPD studies in the WOS database by year of publication.



Source: WOS (2022).

To identify and analyse the documents focussing on peer feedback and teacher professional development an initial search of seven specific data bases was carried out: Scopus, Web of Science (WOS), Dialnet

Plus and the EbscoHost platform (including ERIC, APA PsycArticles, APA PsychInfo and Teacher Reference Centre), mainly using the following key words: *feedback* and *professional development* (ERIC Thesaurus).

TABLE 1. Search equations.

Data bases	Search equation	Documents
WOS	TS=((“feedback” OR “peer feedback” OR “peer coaching” OR “peer-to-peer feedback” OR “feedback observation teach*” OR “dialogic* feedback” OR “feedback system”)) AND TS=(“education*” OR “teach*” OR “school”) AND TS= ((“professional development” OR “teacher agency”))	2522
Scopus	TITLE-ABS-KEY((“feedback” OR “peer feedback” OR “peer coaching” OR “peer-to-peer feedback” OR “feedback observation teach*” OR “dialogic* feedback” OR “feedback system”)) AND TITLE-ABS-KEY (“education*” OR “teach*” OR “school”) AND TITLE-ABS-KEY ((“professional development” OR “teacher agency”))	2453
ERIC	((“feedback” OR “peer feedback” OR “peer coaching” OR “peer-to-peer feedback” OR “feedback observation teach*” OR “dialogic* feedback” OR “feedback system”)) AND (“education*” OR “teach*” OR “school”) AND ((“professional development” OR “teacher agency”))	2394
APA PsychInfo	((“feedback” OR “peer feedback” OR “peer coaching” OR “peer-to-peer feedback” OR “feedback observation teach*” OR “dialogic* feedback” OR “feedback system”)) AND (“education*” OR “teach*” OR “school”) AND ((“professional development” OR “teacher agency”))	1764
Teacher Reference Center	((“feedback” OR “peer feedback” OR “peer coaching” OR “peer-to-peer feedback” OR “feedback observation teach*” OR “dialogic* feedback” OR “feedback system”)) AND (“education*” OR “teach*” OR “school”) AND ((“professional development” OR “teacher agency”))	348
Dialnet Plus	(“feedback” OR “peer feedback” OR “dialogic* feedback”) AND (teach*) AND (“professional development”)	91
APA PsycArticles	((“feedback” OR “peer feedback” OR “peer coaching” OR “peer-to-peer feedback” OR “feedback observation teach*” OR “dialogic* feedback” OR “feedback system”)) AND (“education*” OR “teach*” OR “school”) AND ((“professional development” OR “teacher agency”))	33

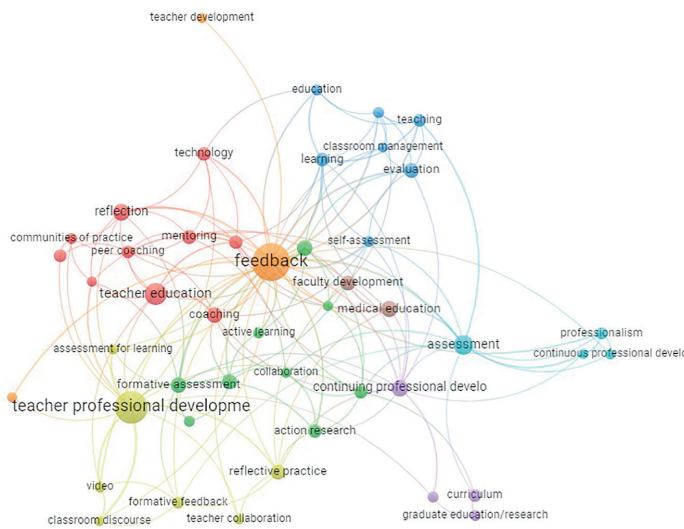
A bibliometric analysis of the Scopus and WOS results was carried out using the VOSViewer to consolidate the significance of the relation between the search equations and the objective of the study.

As an example, the Scopus case is presented, showing that the results are significant, since the key words *peer feedback* and *teacher professional development* are those that obtain the greatest scope (71 and 27, respectively) and number of hits (71 and 53, respectively), accounting for more than most of the other key words.

This process allowed us to evaluate whether the initial search was significant and was followed by phase to evaluate the characteristics of the documents. Inclu-

sion criteria were the following: studies evaluated by blind peer review; studies whose analysis is focussed on peer feedback, with symmetrical roles; studies linked to teacher professional development; studies published between 2012 and 2022, and those centred on the basic education stage. Other criteria for inclusion were based on language, with 93.33% of articles written in English, and document type, restricting the selection only to articles published in specialised journals. Meanwhile, the exclusion criteria were the following: duplication of documents or content of the study when non-symmetrical feedback was identified, exclusion by educational level (higher education or university level), exclusion by area of research and type of methodology used (Figure 3). Finally, a total of 30 documents were included (Table 2).

FIGURE 2. Relation between peer feedback and teacher professional development in Scopus.



Source: VOSViewer (2022).



TABLE 2. Documents selected.

Authors	Year	Title	Type*
Alam, Aamir & Shahzad	2020	Continuous professional development of secondary school teachers through peer observation: Implications for policy and practice	Art.
Ben-Peretz, Gottlieb, & Gideon	2018	Coaching between experts - Opportunities for teachers' professional development	Art.
Butler & Yeum	2016	Dialogic competence of primary school English teachers in online peer coaching: A case study in South Korea	Art.
Charteris & Smardon	2013	Second look - second think: A fresh look at video to support dialogic feedback in peer coaching	Art.
Charteris & Smardon	2014	Dialogic peer coaching as teacher leadership for professional inquiry	Art.
Charteris & Smardon	2015	Teacher agency and dialogic feedback: Using classroom data for practitioner inquiry	Art.
Charteris & Smardon	2016	Professional learning as <i>diffractive</i> practice: Rhizomatic peer coaching	Art.
Cravens & Hunter	2021	Assessing the impact of collaborative inquiry on teacher performance and effectiveness	Art.
Duran, Corcelles & Miquel	2020	La observación entre iguales como mecanismo de desarrollo profesional docente: la percepción de los participantes de la Xarxa de Competències Bàsiques [Peer observation as a teacher professional development mechanism: The perception of participants in Xarxa de Competències Bàsiques]	Art.
Huber	2013	Multiple learning approaches in the professional development of school leaders: Theoretical perspectives and empirical findings on self-assessment and feedback	Art.

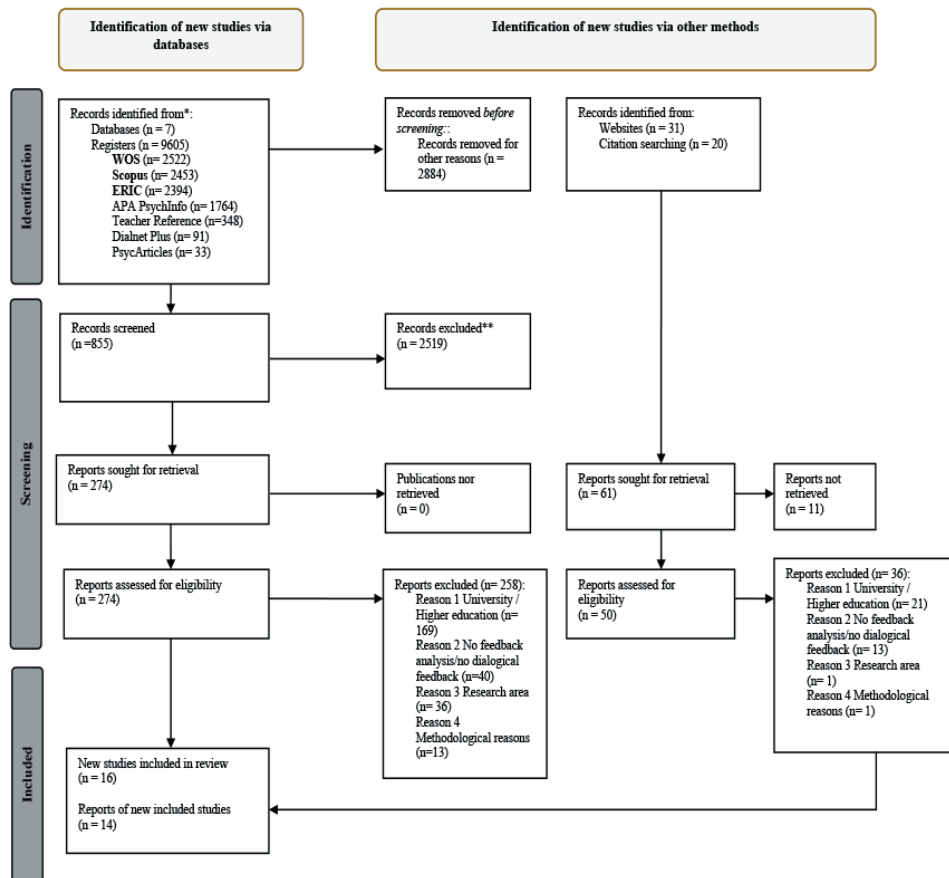
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Ivarsson	2019	What's in it for me? Peer observation of teaching: Experiences from a primary school in Sweden	Art.
Jao	2013	Peer coaching as a model for professional development in the elementary mathematics context: Challenges, needs and rewards	Art.
Johnston, Baik & Chester	2022	Peer review of teaching in Australian higher education: A systematic review	Rew.
Kunemund, Kennedy, Carlisle, VanUitert & McDonald	2022	A multimedia option for delivering feedback and professional development to teachers	Art.
Limbere, Munakata, Klein & Taylor	2022	Exploring the tensions science teachers navigate as they enact their visions for science teaching: What their feedback can tell us	Art.
Mouraz, Pinto, & Torres	2022	Effects of a model for multidisciplinary peer observation of teaching in teacher professional development and in nurturing a reflective school	Art.
Murphy, Weinhardt & Wyness	2021	Who teaches the teachers? A RCT of peer-to-peer observation and feedback in 181 schools	Art.
O'Leary	2012	Exploring the role of lesson observation in the English education system: a review of methods, models and meanings	Rew. Bib.
Parr & Hawe	2017	Facilitating real-time observation of, and peer discussion and feedback about, practice in writing classrooms	Art.
Perry, Davie & Brady	2020	Using video clubs to develop teachers' thinking and practice in oral feedback and dialogic teaching	Art.

Ridge & Lavigne	2020	Improving instructional practice through peer observation and feedback: A review of the literature	Rew.
Rosselló & De la Iglesia	2021	El <i>feedback</i> entre iguales y su incidencia en el desarrollo profesional docente [Peer feedback and its impact on professional teaching development]	Art.
Singh & Mueller	2021	Taking a nuanced view of the role of teacher feedback in the elementary classroom	Art.
Smith & Lynch	2014	Improving teaching through coaching, mentoring and feedback: A review of literature	Rew. Bib.
Thurlings, Vermeulen, Kreijns, Bastiaens & Stijnen	2012	Investigating feedback on practice among teachers: Coherence of observed and perceived feedback	Art.
Torres, Lopes, Valente & Mouraz	2017	What catches the eye in class observation? Observers' perspectives in a multidisciplinary peer observation of teaching program	Art.
Van den Bergh, Ros & Beijaard	2014	Improving teacher feedback during active learning: Effects of a professional development program	Art.
Van der Lans, Van de Grift, Van Veen & Fokkens-Bruinsma	2016	Once is not enough: Establishing reliability criteria for feedback and evaluation decisions based on classroom observations	Art.
Voerman, Meijer, Korthagen & Simons	2015	Promoting effective teacher-feedback: From theory to practice through a multiple component trajectory for professional development	Art.
Wylie & Lyon	2020	Developing a formative assessment protocol to support professional growth	Art.

*Type: Art. = article; Rew. = systematic review; Rew. Bib. = bibliographic review.

FIGURE 3. PRISMA 2020_flow chart.



With regard to content analysis, the first phase consisted of a round table in which each member of the team carried out two in-depth readings of the 30 documents included in the study. This was done with the aim of identifying correlated dimensions and being able to obtain a map associated with the initial results derived from the cluster shown on the VOSViewer, thus creating a document that would simplify the analysis. In the second phase, an initial scheme was drawn up with the categories to be used to group and classify the content. To do this, inductive criteria (Mejía, 2011) and open coding (Strauss & Corbin, 1998) were used. Triangulation was also carried out in suc-

cessive phases to repeatedly include, modify and eliminate different categories for the analysis.

3. Results

The results are set out in two sections taking into account the initial questions and the objectives of the study. The first section contains the analysis of the results obtained for studies that analyse the characteristics of peer feedback. In the second section the analysis of the results for research analysing the relations between peer feedback and teacher professional development is presented.

3.1. What are the characteristics of the research centred on feedback between teachers?

3.1.1. Publication context: year, place and educational level

The 30 articles reviewed were published in the last 10 years, from 2012 to 2022, as established in the inclusion criteria. In the last three years, there have been more publications (43.33%, $n = 13$), with 2020 being the most assiduous (16.67%, $n = 5$). More than one third of the research was carried out in Europe (43.33%, $n = 13$); 7 studies (23.33%), in North America; 7 (23.33%), in Oceania, and 3 (9.99%), in Asia. In terms of educational level, 18 (59.99%) studies pertained to primary education; 2 (6.66%), to secondary education, and 10 (33.33%) did not specify or were studies based on a multiple / mixed model of levels in basic education.

3.1.2. Characteristics of the intervention

In 43.33% of articles the way in which pairs of teachers give mutual feedback was analysed (Ben-Peretz et al., 2018; Charteris & Smardon, 2013; Duran et al., 2020; Ivarsson, 2019; Jao, 2013; Mouraz et al., 2022; Parr & Hawe, 2017; Rosselló & De la Iglesia, 2021; Thurlings et al., 2012; Torres et al., 2017; Van der Lans et al., 2016; Voerman et al., 2015; Wylie & Lyon, 2020). These studies opted for symmetrical feedback without role inequality. Even in the study by Ben-Peretz et al. (2018), which analysed the exchanges among expert teachers, a high level of competence of both teachers was assured.

Feedback offered to the group was examined in 90% of the articles, of which 9.99% ($n = 2$) was between teachers and students (Singh & Mueller, 2021; Van den Bergh et al. 2014), and 23.33% ($n = 7$), between groups of three or more teachers. Only 6.66% ($n = 2$) of the articles did not specify the type of feedback (Cravens & Hunter, 2021; Murphy et. al., 2021).

As appears in the literature, feedback training is considered key to ensure it is of sufficient quality (Butler & Yeum, 2016; O'Leary, 2020; Wylie & Lyon, 2020). In 36.66% ($n = 11$) of the articles the fact that specific feedback training was offered to participants was underlined, and one (Singh & Mueller, 2021) noted that the teachers had already received training on how to give feedback. Also, in 23.33% ($n = 7$), teachers had received training in some content or skills related to the observation and feedback process (Charteris & Smardon, 2015; Charteris & Smardon, 2016; Duran et al., 2020; Huber, 2013; Mouraz et al., 2022; Singh & Mueller, 2021; Wylie & Lyon, 2020) and 10 studies (33.33%) reported that the participants had had no previous training (Alam et al., 2020; Ben-Peretz et al., 2018; Butler & Yeum, 2016; Charteris & Smardon, 2013; Cravens & Hunter, 2021; Ivarsson, 2019; Jao, 2013; Limbere et al., 2022; Wylie & Lyon, 2020;). Of these latter cases, two (Butler & Yeum, 2016; Wylie & Lyon, 2020) specifically mentioned the need for training of participants.

In 83.33% ($n = 25$) of the studies analysed at least one instrument was used for the observation or feedback phase. Among

these, in 7 articles (23.33%), the observers chose their own focus of interest; in 13 (43.33%), the focus was previously established by the researchers; in five articles (16.66%), it was not specified.

Finally, of the 30 articles analysed, 33.33% ($n = 10$) used a specific protocol or a guide to orientate participants in the process of observing and giving feedback on teaching practice. A total of 12 (40%) completed the stages of the process: a meeting prior to the observation, an observation session and a feedback session (O'Leary, 2020). In five studies (16.66%) the stages of the process were either missing or not specified.

As regards the number of observation and feedback cycles (one cycle being defined as the completion of the three-stage process), the results showed that 30% ($n = 9$) of the studies analysed had completed between one and three cycles; 13.33% ($n = 4$) carried out between four and six observation cycles, while 9.99% ($n = 3$), carried out seven or more cycles (Limbere et. al., 2022; Parr & Hawe, 2017; Van den Bergh et. al., 2014). Also, nine of the studies (30%) did not specify whether they carried out more cycles, but they did assure that at least one took place.

3.1.3. Research study: design, participants, data collection instruments and types of research evidence

In terms of the research design, 43.33% ($n = 13$) of the studies used a mixed method; 40% ($n = 12$), qualitative design, and just one of the studies (3.33%), an exclu-

sively quantitative method. Moreover, two articles (6.66%) were systematic reviews and two (6.66%) were bibliographical reviews.

On analysing the sample, the results showed that more than half the articles (53.33%, $n = 16$) are made up of studies of fewer than 50 teachers, while the rest included between 50 and 100 (6.66%; $n = 2$) or over 100 teachers as participants (23.33%; $n = 7$).

Regarding the data collection instruments, most of the studies used vídeo recordings (40%; $n = 12$), questionnaires (36.33%; $n = 11$), interviews (33.33%; $n = 10$), evidence of teaching practices such as written observation reports or feedback reports (23.33%; $n = 7$) or, to a lesser extent, audio recording for analysing teacher meetings (9.99%; $n = 3$). One study used focus groups (3.33%; $n = 1$) and, in six of the studies, data was collected on student achievements (20%; $n = 6$).

Regarding the type of research evidence obtained, most (79.99%; $n = 24$) focused on an analysis of feedback quality and 60.66% ($n = 20$) were based on teacher perceptions. Only four studies (13.33%) included a specific analysis of student performance.

3.2. What evidence does the research offer after analysing peer feedback and TPD?

3.2.1. Pros and cons on the teaching level

The 26 studies selected that analysed evaluations of teachers with respect to

feedback (86.66%) agree that teachers perceive advantages for their professional development.

Charteris & Smardon (2013) stated that feedback helps to improve teacher participation, stimulates careful and exhaustive analysis of the data, and facilitates the identification of the next steps in their professional learning. These authors introduced the concept *teaching agency* in the three relational dimensions (Emirbayer & Mische, 1998): iterative, projective and practical-evaluative, reporting that feedback can offer space for manoeuvre, for improving decision-making with a view to improving student learning outcomes and their own practice, from a process of profound and continuous learning.

The study by Perry et al. (2020) reported that 80% of participants informed that the focus on formative feedback was relevant to their professional development needs. Mouraz et al. (2022) add that it permitted improvement in teaching, but also in the scientific dimension. Adhering to this idea, Charteris & Smardon (2014) stated that it can also strengthen teaching leadership and professional inquiry-based practices.

Furthermore, Ben-Peretz et al. (2018) highlighted that sharing practices means that experienced teachers have the chance not only to improve intellectually but also to reawaken their own passion for what they do, which in turn leads them to a continuing desire for improvement which boosts professional development.

All the studies selected agreed on a positive assessment of shared pedagogical debate focused on the analysis of practice. Jao (2013) reported that during situations of giving and receiving feedback each teacher saw that they were doing something more than simply sharing their observations, given that they were able to work together to enrich each other's practices. There was a reciprocal investment in their growth since each teacher brought new ideas and suggestions for improvement.

Most of the studies reviewed affirmed that one of the most significant benefits of feedback among teachers lies, indirectly, in an increase in self-esteem, proximity and recognition among peers (Mouraz et al., 2022). Since it empowers the teachers, this factor facilitates the introduction of new strategies and practices based on comparison and reflection rather than imposition or the desire to make innovations without empirical backing. Torres et al. (2017) added that peer feedback results in greater openness, trust and readiness to experience new strategies and styles, offering learning opportunities for better teaching. In that sense, and as an example of benefits centred on the evaluative dimension, Wylie & Lyon (2020) highlighted that the process of giving and receiving feedback gives teacher a better understanding of formative evaluation and can lead to positive changes in their practice. Along the same lines, the study by Parr & Hawe (2017), with seven observation cycles, identified a significant change in the type of feedback given by teachers since it sets out from initial general comments and goes on to more specific comments with pieces of evidence

at the end. More than half the teachers perceived that their comments influence the practice of future shared sessions.

Despite the multiple benefits presented, the review of the literature also flagged up some problems and resistance at the teaching level for carrying out quality peer feedback.

Of the 30 studies analysed, half included concerns by teachers on sharing peer observation and feedback. Their fear of being judged and of there being repercussions on their professional career is recurrent (Alam et al., 2020). This is the result of the evaluative culture of the observation and feedback process that continues to impregnate most of the practices analysed in the review studies selected (Johnston et al., 2022; Smith & Lynch, 2014; O'Leary, 2012; Ridge & Lavigne, 2020). According to Charteris and Smardon (2015), it is important to remember that these practices are ecological and emerging. As such, they cannot be invented or imposed through the rational technical interpretations of educational agendas for improvement if they are to have a real impact on teaching practices.

Another repeated fear is that of offending the observee with honest messages that do not give a positive evaluation of the practices observed, even when those messages are backed up by evidence. Some studies stated that teachers indicated they would like to be better at transmitting those negative messages and would like to receive training in that respect (Ben-Peretz et al., 2018; Ivarsson, 2019; Parr & Hawe, 2017), and that the protocols and

instruments used in the process should facilitate that training (Duran et al., 2020; Jao, 2013; Mouraz et al., 2022; Thurlings et al., 2012; Torres et al. 2017; Wylie & Lyon, 2020).

As a consequence of the fear of offending, many of the studies stated that general, friendly-type feedback was the most common and concluded that it takes place without focusing on any specific area for improvement. Thurlings et al. (2012) inferred that information that is not specifically directed at an objective or at one person, that is vague, undetailed and too positive, or too negative is the type of feedback that does not result in teaching improvement. However, studies such as that of Singh & Mueller (2021) concluded that all feedback brings benefits, even when it is not considered effective in the literature.

3.2.2. Pros and cons on the organisational level

The studies analysed saw the contributions at the level of the centre as being positive. Specifically, the results of the study by Duran et al. (2020) showed that 93% of teachers considered that observation, followed by feedback, allow the creation of feelings of empathy, personal and mutual confidence among teachers, greater motivation for sharing ideas with colleagues and learning from other teachers, motivation to prepare materials and sessions collaboratively and to identify common needs for improvement to be able to implement future actions for better professional development.

In turn, Mouraz et al. (2022) suggested that collaborative work and a general increase in teaching collaboration offered by peer observation and feedback led to pedagogical improvement but also enrichment of the scientific dimension. Charteris & Smardon (2014) added that there is an increase in leadership capacities in line with exchanges of dialogic feedback. In the same sense, Huber (2013) stated that feedback in the form of self-evaluation contributes to supporting the career planning processes of possible candidates for leadership positions.

Despite these positive perceptions of collegiality among peers, some difficulties were identified on the organisational level. On the one hand, the studies described the problem of reserving the required time in a formal setting that allows the analysis of practices and peer feedback to be carried out (Ben-Peretz et al., 2018; Jao, 2013; Ivarsson, 2019; Rosselló & De la Iglesia, 2021). On the other, Cravens & Hunter (2021) described the added difficulty of the dissuasive effect of the results over time, a variable to be considered when making decisions to maintain said practices sustainably.

4. Discussion and conclusions

This systematic review of the literature has contributed to enriching the current state of knowledge based on the evidence of feedback among teachers, centred exclusively on the collaborative and symmetrical model, among teachers with similar levels of experience, at the stage of basic education.

The review of the 30 articles selected has shown a growing interest in relation to this subject over the last decade, mainly in English-speaking countries, although it is also generalised internationally, with a predominant focus on the secondary and higher stages of education. However, it is still uncommon to find the analysis of feedback using a collaborative model, implemented by colleagues, with shared learning among teachers and a non-judgemental focus to promote professional development (O'Leary & Savage, 2020).

Using mainly mixed methods and qualitative designs, and a variety of data collection instruments, the studies analysed are principally centred on teacher perceptions and offer a greater understanding of them. Despite this, studies using information from observations, audios or videos, and which enable analysis of how teachers exchange feedback to improve their teaching practices are still scant. For that reason, any future research should focus on offering more empirical evidence of the impact of feedback on teaching practice to complement the current knowledge.

On the other hand, most studies use and recommend the use of an instrument to guide the practices of observation and/or feedback and to carry out more than three cycles of observation which helps to sustain practices over time so that their impact is not dissuasive. They also suggest establishing a focus for observation which should be specified in the session prior to the observation and the feedback

to achieve more in-depth analysis of specific dimensions and to outline proposals for the improvement of practices (O'Leary, 2020).

The need for training to enable teachers to give and receive better quality feedback must also be reiterated. The few studies that do not give information about this training recognise how much it is needed (Butler & Yeum, 2016; Wylie & Lyon, 2020). Based on these contributions, it is considered that these training programmes need to be rethought and focused on TPD. A detailed understanding of TPD and the conditions under which higher success rates are achieved bring us to the concept *teacher agency* (TA) that has emerged in the English-speaking world, understood as the capacity of teachers to purposefully and constructively manage their professional growth and contribute to the growth of their peers to be able to generate professional learning communities (Duran et al., 2020; Pancosofar & Petroff, 2013; Pietarinen et al., 2016; Pyhältö et al., 2015; Stoll, 2015). From this perspective of collaboration, several authors analyse TA using the mechanisms of observation and feedback (Charteris & Smardon, 2015; Dos Santos, 2016; O'Mahony & Schwartz, 2018). The results obtained show that, on the one hand, dialogic feedback offers teachers a space for taking decisions to improve student learning outcomes (Rapanta et al., 2021). And, on the other, that TA can be seen in the relational positioning during peer feedback sessions and on establishing links between the cultural,

structural and material elements of the learning contexts.

However, the teachers participating also reported problems. They recognise the difficulty of offering and receiving critical comments to and from colleagues without having had prior training. The articles that analysed feedback agree that it is descriptive and general rather than specific and aimed at a particular objective or elements to be improved. In terms of the professional distance among teachers, which can facilitate feedback or make it more difficult, the studies did not produce any conclusive results. This suggests that, beyond symmetry among the two members of the pair, it is the desire to learn from and with others that is really significant. Sustained practice seems to offset this problem. Studies involving multiple observation cycles show how the participants learn to improve the quality of the feedback.

It would therefore seem that to overcome any complacency which would turn feedback into a conservative instrument which is not useful for improving educational practices, we need to ensure that participants are able to offer quality feedback, set aside and programme feedback sessions with adequate time and structure and offer support and tools such as conversation guides or the use of video clips (Thurlings et al., 2012).

On the organisational level, the main difficulty involves time limitations and institutional support. Collaborative

teaching practices, also understood as professional development activities, must be recognised within the teachers' working hours. If not, it is difficult to move from an individual conception of teaching to one of collaboration (Hargreaves & O'Connor, 2018; Darling-Hammond et al., 2017).

Accepting that this systematic review is not centred on the analysis of teacher-student feedback, since that would not be symmetrical, when teachers are asked about peer feedback, they say that it has a positive effect on the students (Parr & Hawe, 2017). However, in the few studies that analyse student tests the results are not very conclusive. Future research could be based on the identification of changes in specific aspects of student performance that are known to correlate with their learning.

Although this review offers a broader understanding of peer feedback as a TPD tool, some limitations should be highlighted. First, the analysis presented concentrates only on basic education. Second, the studies reviewed present results that must be interpreted with some caution because the participants in the studies selected tended to be teachers who were willing to take part in this kind of collaborative teaching practice.

In the light of the data analysed, it can be concluded that this review bridges part of the existing gap in the scientific literature on the benefits of peer feedback. It can be seen that improvements in teaching practice can be obtained from a

collaborative and symmetrical approach, and through dialogue-based feedback. It is therefore hoped that this systematic review will be useful for researchers, since it facilitates a more profound exploration of this approach, and also one for educational leaders to support, since a culture of collaboration between teachers leads to greater effectiveness in schools and in teacher professional development.

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