

Peer Assessment as a Tool to Enhance Pre-Service Primary Bilingual Teachers' Training

(La evaluación entre iguales para mejorar la formación inicial de maestros bilingües de Educación Primaria)

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Abstract

Peer assessment (PA) has proven to promote motivation towards learning and reduce anxiety while fostering critical thinking. However, there is limited research on pre-service teachers' perceptions and concerns regarding its application in their lessons, and hardly any study addresses the opinions of pre-service primary bilingual teachers. This paper presents a mixed-methods research that investigated how pre-service primary bilingual teachers analyse PA after a teaching experience using video-teaching. After an initial exploratory stage based on the Grounded Theory, semantic and content analyses were carried out. The qualitative analysis of the data was performed with NVivo Plus version 12 for Windows, which also allowed the transformation of the results into quantitative data. Results showed that the participants had a very positive attitude towards PA, emphasizing that this type of assessment helps them improve their teaching performance. Other strengths of PA identified were that it is a useful technique for their future careers, and they can learn from mistakes. Although the participants also mentioned a series of concerns regarding PA, their reluctance to change their practice could be easily overcome, as they would be familiar with this technique prior to beginning their professional careers. Finally, considerations and recommendations to apply PA in pre-service primary bilingual teacher training by using video-teaching are discussed.

Keywords: evaluation; teacher education; bilingual education.

Resumen

La evaluación entre iguales tiene numerosas ventajas, pues se ha demostrado que promueve la motivación hacia el aprendizaje y reduce la ansiedad, a la vez que fomenta el pensamiento crítico. Sin embargo, hay pocas investigaciones sobre las percepciones de los maestros en formación con respecto a su aplicación y son muy limitados los estudios que consideran a los maestros bilingües de Educación Primaria en formación. Este trabajo presenta una investigación de métodos mixtos que aborda cómo los maestros bilingües de Educación Primaria en formación analizan la evaluación entre iguales tras una experiencia docente empleando enseñanza en vídeo. Tras una primera fase inicial exploratoria basada en la Teoría Fundamentada, se llevaron a cabo análisis semánticos y de contenido. El análisis cualitativo de los datos se realizó con NVivo Plus (versión 12 para Windows), herramienta que también permitió la transformación de los resultados en datos cuantitativos. Los resultados reflejan que los participantes tienen una actitud muy positiva hacia la evaluación entre iguales, y destacan que este tipo de evaluación les ayuda a mejorar su rendimiento. Otros puntos fuertes de la evaluación entre iguales fueron que se trata de una técnica útil para su futuro profesional y que les permite aprender de los errores. Aunque los participantes también mencionaron una serie de preocupaciones respecto a la evaluación entre iguales, las posibles reticencias podrían superarse fácilmente, ya que estarían familiarizados con esta técnica antes de comenzar su carrera profesional. Finalmente, se presenta una serie de consideraciones y recomendaciones para aplicar la evaluación entre iguales mediante la docencia en vídeo en la formación inicial de maestros bilingües de Educación Primaria.

Palabras clave: evaluación; formación de profesores; enseñanza bilingüe.

Citizens of the 21st century are required to be highly critical thinkers (Saleh, 2019). In this light, improving critical thinking skills, sine qua non for knowledge development, has become key at schools (Chien et al., 2020). But not only is critical thinking required for students, but also for teachers since they must be prepared for their professional practice as educators of the new generations as well as for turning their students into critical thinkers (Lorencová et al., 2019).

Among the pedagogical possibilities to develop critical thinking, Peer Assessment (PA) is an activity with many educational benefits for students (Panadero & Alqassab, 2019) such as increasing motivation towards learning and reducing anxiety (Yastıbaş & Yastıbaş, 2015), higher academic performance (Dochy et al., 1999), and gaining domain-specific skills (van Zundert et al., 2010). PA is a strategy in which an individual is engaged in evaluating “the level, value, or quality of a product or performance of other equal-status learners” (Topping, 2009, pp. 20-21). Research has shown the manifold pedagogical, motivational, professional and cognitive benefits of PA (e.g., Adachi et al., 2018; Chien et al., 2020; Huisman et al., 2018; Yastıbaş & Yastıbaş 2015). Basically, PA enhances the learning of self-monitoring metacognitive processes, and in the case of teachers it has been demonstrated that

those educators who use PA outperform their counterparts in terms of innovative and effective understandings of assessment (Ng, 2016).

Literature has explored the potential of technology for PA in teacher education (Ng, 2016; Seifert & Feliks 2018) and, among all the possible tools, video-based PA offers a promising alternative to face-to-face feedback and reflection sessions as it does not require the physical presence of assessment experts (Chien et al., 2020; Nisbet et al., 2017; Prilop et al., 2020). Despite the benefits of PA as a tool to enhance students' learning through knowledge spreading, exchange of ideas, and opening to new perspectives, up to our knowledge there is limited research on pre-service teachers' perceptions and concerns regarding its application in their lessons (Ng, 2016; Sahin-Taskin, 2018; Seifert & Feliks 2018), yet hardly any study addresses the opinions of pre-service primary bilingual teachers.

This paper presents a mixed-methods research that investigated how pre-service primary bilingual teachers analyse PA after a teaching experience based on video-teaching carried out during the academic year 2019/20. The objective of this research is to explore the perceptions, attitudes and concerns regarding PA of pre-service primary bilingual teachers (N = 58) of the course 'English as a Foreign Language for Primary Education Teachers', bilingual itinerary, of the University of Córdoba, Spain.

THEORETICAL BACKGROUND

Peer assessment explored effects

A variety of definitions of PA can be found in scientific literature (Dochy et al., 1999; Topping, 2009). Nevertheless, for the purpose of this paper, PA is defined as the process by which students give descriptive and constructive feedback on the work of their fellows, which can be then expressed by a combination of numerical grades and qualitative feedback. Following Panadero and Alqassab (2019), we consider a variety of synonyms under this definition, including peer feedback, peer review, peer evaluation and peer grading (differences between these terms are discussed in van Gennip, 2012, among others). According to Adachi et al. (2018), PA takes places in settings and activities that involve: (i) decisions concerning the use of PA; (ii) link between PA and other educational elements; (iii) interaction between peers; (iv) composition of assessment groups; (v) management of the assessment procedure; and (vi) contextual elements.

There is ample debate about the potential of PA for students' learning process. PA seems to bring new opportunities for learners to develop transferable skills such as collaborative work and critical thinking (Adachi et al., 2018), and problem-detection and problem-solving abilities (Huisman et al., 2018). It also allows students to reconceptualise previous knowledge and use it constructively (i.e., not only do they enhance their reflective skills to help their peers, but also to realise the limitations of

their own work), therefore improving their learning outcomes and motivation (Chien et al., 2020). Moreover, in the field of language learning, learners also experience a decrease in their learning anxiety (Chien et al., 2020; Yastıbaş & Yastıbaş, 2015) and see their abilities improved (speaking – Chang & Lin, 2019; writing – Huisman et al., 2018).

It must be taken into account that anonymity is an important component when describing interactions among peers. Anonymity can be bidirectional (both the assessor and the assessee are anonymous) or unidirectional (either the assessor or the assessee is anonymous). Research has proved that anonymity is one of PA's main advantages because it reduces stakeholders' stress while allowing learners to express their opinions freely (Seifert & Feliks 2018). Likewise, it entails the improvement of students' individual engagement and participation, since individuals may also observe and imitate what their peers do or have done (Chien et al., 2020). As for technology-based PA, it supports the learning process of autonomous learners (Ng, 2016), and eventually it also allows "reflective knowledge building" (Huisman et al., 2018, p. 956).

PA, however, presents some challenges and barriers. Some scholars (e.g., Adachi et al., 2018) agree on the fact that students' distrust and shortage of confidence due to their inexperience may hinder positive results when implementing PA. In this sense, some learners may value experts' evaluation more highly than that made by their peers (Seifert & Feliks, 2018), which may not even be taken seriously due to a lack of consistency between the expert and their equals. Besides, some learners and teachers involved in it claim that PA is more time-consuming and demanding than more traditional ways of evaluation (Ng, 2016). All in all, there is a clear need for educators to thoroughly discuss assessment criteria and be very clear of what learners are expected to do before implementing PA so as to guarantee a positive experience (Seifert & Feliks 2018).

Teachers, peer assessment and beliefs

Many studies have stated the benefits of implementing PA for teachers. Educators who use this assessment strategy outperform their counterparts in terms of innovative understandings of assessment (Ng, 2016). Additionally, PA helps develop better teacher-student communication about the learning process, and although educators believe implementing it is often hard due to time requirements, they tend to think it is beneficial for students (Büyükkarcı, 2014). But despite the benefits and the many studies that support the effectiveness of PA (Chien et al., 2020; Li et al., 2020), little research has explored teachers' opinions about the appropriateness of PA (Panadero & Brown 2017) and even less has examined the perceptions and concerns of pre-service teachers in this regard (Sahin-Taskin, 2018; Seifert & Feliks, 2018).

Adachi et al. (2018) distinguish 5 main challenges identified by teachers when implementing PA in the Australian context: (i) time and cost; (ii) learners' motivation

when the assessment criteria are not clear; (iii) superficiality of the given feedback; (iv) students' lack of feedback skills; and (v) the difficulty to adapt PA to an online environment. In this sense, it is interesting to highlight that Panadero and Brown (2017) find that PA is not frequently used in the Spanish setting because teachers believe that it is unreliable due to students' distrust and that it usually creates a negative learning climate.

As for pre-service teachers, Ng (2016) develops a questionnaire-based quantitative study to show how they believe PA positively changes their perceptions of assessment (Msiza et al., 2020) and the way they value their educators. Likewise, Sahin-Taskin (2018) studies the effects of PA on pre-service teachers' pedagogical beliefs and the self-efficacy and reveals that they think that PA makes them better teachers and that it allows them to enhance their students' independence and reflective practice. However, when it comes to pre-service primary bilingual teachers and PA application in their lessons, up to our knowledge there is limited research on their perceptions.

Video-based peer assessment

The use of video in PA is increasingly acquiring relevance in scientific literature (Chien et al., 2020; Prilop et al., 2020). As pointed by Nisbet et al. (2017), the affordability of video recording devices and their pedagogical benefits (e.g., development of critical thinking and problem-solving skills) have enhanced its use in many and varied educational scenarios and also for PA.

In their study, Chien et al. (2020) combine video-based virtual reality and PA to provide high-school students with comments on their speaking performance in an English-language classroom. The experience reveals that learners' oral performance, motivation and thinking skills improve when using PA, whereas learning anxiety decreases. This study also shows that, while praise feedback helps students enhance their performance, criticism seems to be prejudicial. Conversely, Nikolic et al. (2018) study the impact of video in PA to evaluate engineering students' oral presentation skills. According to their findings, although students believe that PA is beneficial for them, the experience did not result in significantly better oral presentation skills (presumably because the activity was not considered for the subject's final grade). In this sense, further research on the potential of video-based PA seems to be necessary.

Concerning pre-service teachers, Prilop et al. (2020) examine the potential of video-based PA for developing future teachers' feedback competence. In this study, participants had to provide written feedback after watching videos of their peers teaching in fictitious situations; video-based PA proved to bring better effects, be more specific and provide higher quality recommendations than traditional face-to-face PA.

Finally, Díaz-Martín and Gómez-Parra (2019) developed and validated an observation guide to pre-service teachers for evaluating videos from CLIL (Content

and Language Integrated Learning) lessons, the European approach to bilingual education, although it can also be useful for other types of bilingual education. Their observation guide has 5 categories and 16 subcategories structured as follows: (i) adaptation of the language and the content according to the level (3 subcategories); (ii) focus on the meaning (3 subcategories); (iii) focus on language forms (5 subcategories); (iv) lesson plan (4 subcategories); and (v) reflection (1 subcategory).

METHODS

An exploratory mixed-method study was carried out to understand and analyse pre-service primary bilingual teachers' perceptions, attitudes and concerns regarding PA after an on-line teaching experience based on video-teaching.

Participants

The target population of this study was composed of the students of the course 'English as a Foreign Language for Primary Education Teachers', bilingual itinerary, of the University of Córdoba, Spain. Three groups of students can be identified within this population: (i) Year 3 students of the Degree in Primary Education (PS); (ii) Year 3 students of the Double Degree in Primary Education and English Studies (DS); and (iii) Erasmus students (students participating in an EU student exchange program) (ES).

A non-probabilistic sample based on convenience was used for participants ($N = 58$). Eligibility criteria were based on proximity and participation in a PA teaching experience based on video-teaching. The distribution of the participants according to the three aforementioned groups was as follows: 35 PS (60.34%), 19 DS (32.76%), and 4 ES (6.90%). Moreover, 46 (79.31%) of the participants were female, and 12 (20.69%) were male. The mean age was 21.16 years (range = 20–27; $SD = 1.554$). The mean age of female participants (21.13, $SD = 1.614$) showed no statistically significant differences ($p > 0.05$) with that of male participants (21.25, $SD = 1.357$). Finally, regarding nationality, 54 participants (93.10%) were from Spain, while 2 participants (3.45%) were from Poland, 1 participant (1.72%) was from Austria, and 1 participant (1.72%) was from Finland.

Context and instrument

All the participants in the study took part in an on-line teaching experience in which they had to record themselves in a 5-minute video explaining contents using English as the language of instruction during the spring semester of the academic year 2019-20, marked by the lockdown derived from the COVID-19 pandemic. After that, they had to assess at least two videos made by their partners. The technique used

for PA was an online rubric which generated anonymised bulls-eye visuals (graphic representations of final scores, together with specific feedback), which was given to the authors of the videos together with written feedback. Finally, the participants had to write an essay (150-200 words), which was the instrument used for data collection. The instrument had three questions: (i) As a future bilingual teacher, what do you think about peer assessment (that is, evaluating your partners' work with the aim to help them improve)? Is it useful or not? Why?; (ii) Do you think analysing videos is a good way to assess the work of other teachers? Why? / Why not?; and (iii) Do you think analysing videos made by other teachers can help you to reflect on your own teacher practice? Given the standardization and identical wording of the three questions posed, it allows a comparable analysis of the participants' responses.

Data analysis

In order to gain preliminary understanding of the perceptions on PA, initially a qualitative research methodology based on the Grounded Theory (GT) (Glaser & Strauss, 1967) was used. "Grounded theory is based on the systematic generating of theory from data, that itself is systematically obtained from social research" (Glaser, 1992, p. 2). It must be considered, according to Cresswell and Poth (1998, pp. 55-56), that the intention underlining GT "is to generate or discover a theory, an abstract analytical schema of a phenomenon that relates to a particular situation".

Following GT, semantic and content analyses were performed. Although it was initially developed for a quantitative approach (Berelson, 1952), later descriptions emphasise that content analysis has experienced a significant evolution, moving from a quantitative perspective to a more interpretative technique within the qualitative paradigm (Schreier, 2012; Lindgren et al., 2014). Nowadays content analysis is understood as a value-based process constituted by multiple realities, and the creation and development of individual and multifaceted perceptions of phenomena (Lincoln & Guba, 1985; Graneheim et al., 2017). Content analysis involves replicability and inferences from the data obtained to the context, which may entail the development of new approaches and the representation of facts, and evidence about its applicability and validity must accompany the findings (Krippendorff, 1980).

To carry out content analysis, we followed the steps proposed by Arbeláez and Onrubia (2014): (i) theoretical phase, where the information is initially organised, allowing a first approach to the research; (ii) descriptive phase, where data are structured and analysed (in our case, by using semantic analysis); and (iii) interpretative phase, where content analysis is interpreted according to the emerging categories.

The qualitative analysis of the data was performed with NVivo Plus version 12 for Windows (QSR International 2020). This software allows operating with several categories and subcategories that can be compared with each other thanks

to the intersection matrices. This analysis also allowed it to transform the results into quantitative data (percentages and frequencies). Finally, the quality criteria established by Palacios et al. (2013) were also taken into account.

RESULTS

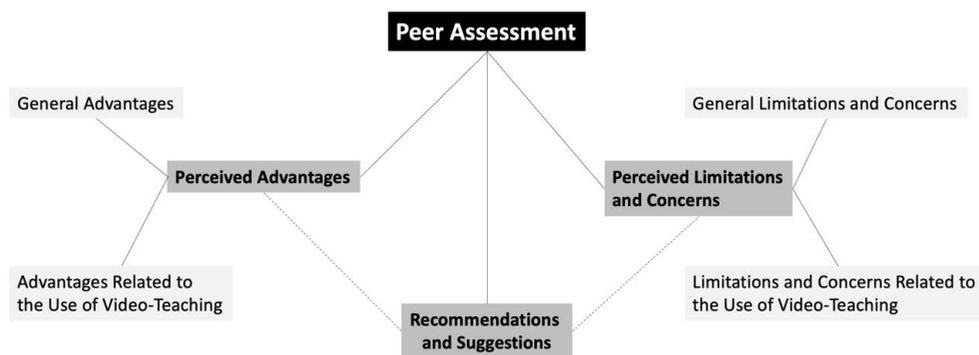
Coding results based on GT

Following the GT procedure (Glaser & Strauss, 1967), a mind map was created after the coding and categorization process of the responses of the participants on PA.

The explanation of the coding process was carried out attending to the topics and contents gathered in the mind map, together with their corresponding interrelations, definitions and a textual example for each category. Figure 1 shows the final categorization of pre-service primary bilingual teachers' attitudes, concerns and perceptions on PA after a teaching experience based on video-teaching.

Figure 1

Mind map after the coding process based on GT



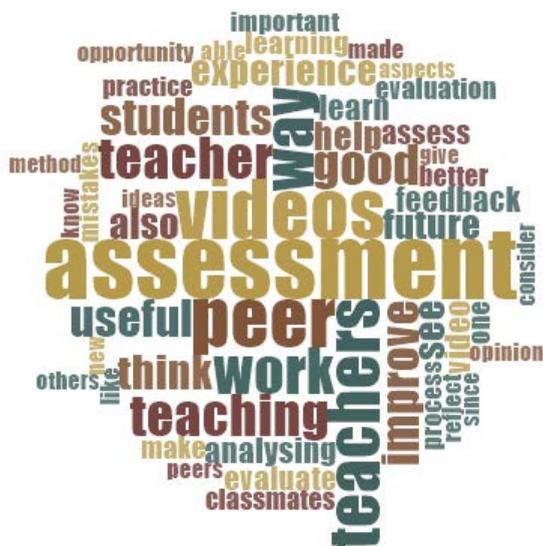
Source: Own elaboration

Semantic analysis

We used NVIVO 12 to design a semantic word cloud (Fig. 2) with the 100 most frequent words found on the participants' responses – it should be taken into account that the greater the frequency, the larger the representation. The words most frequently used by participants (frequency equal to or higher than 100 entries) are: assessment (147), videos (116), peer (115), and teachers (100).

Figure 2

Word frequency represented in a word cloud (100 most frequent words)



Source: Own elaboration

Moreover, the most frequent words among the participants were also compared, and cluster analysis was performed (Bazeley, 2012). This allowed a first grouping of the codes or nodes according to their relationships, creating a cluster analysis (Fig. 3). This semantic analysis allows to establish the initial categorization for further content analysis.

Similarly, the number of entries (both in frequency and percentage) by subcategory was extracted, and the hierarchy is the following:

- Perceived advantages: 91.02% (517)
 - General advantages: 79.4% (451)
 - Advantages related to the use of video-teaching: 11.62% (66)
- Perceived limitations and concerns: 7.92% (45)
 - General limitations and concerns: 2.64% (15)
 - Limitations and concerns related to video-teaching: 5.28% (30)
- Recommendations and suggestions considering video-teaching: 1.06% (6)

In the subcategory entitled *general advantages* a total of 451 entries was coded. The participants highlighted with 14.63% (n=66) that it improves their teaching performance as the top strength of PA perceived by pre-service primary bilingual teachers.

“Teachers must evaluate themselves periodically, in order to improve their teaching skills and make the teaching-learning process as easy as possible for the students” – Participant 17

Furthermore, 11.97% (n=54) of the participants mentioned it is a useful technique for their future as teachers.

“Peer assessment is very useful in several ways, it can help you to see what you can improve in your work and what you may not be doing well” – Participant 16

“Talking from the perspective of a future teacher, peer assessment is a very useful method in order to learn about new resources, methodologies and techniques than can be really beneficial in the teaching-learning process” – Participant 30

Other strengths mentioned as part of this subcategory included: they can learn from mistakes (9.31%, 42 entries), it is an opportunity to learn from others (6.87%, 31 entries), it provides relevant feedback (6.65%, 30 entries), it enhances reflection on their own teaching practice (5.99%, 27 entries), it is inspiring and brings new ideas (4.88%, 22 entries), it helps partners (3.77%, 17 entries) and it is good for both the person who assesses and the person who receives the assessment (3.77%, 17 entries).

“Teachers must evaluate themselves periodically, in order to improve their teaching skills and make the teaching-learning process as easy as possible for the students. For this reason, I consider peer assessment crucial when it comes to helping other partners, as both parts are learning and contributing to the improvement of the teaching-learning process.” – Participant 17

“On many occasions it is said that between partners they understand each other better because they have the same cognitive capacity and can help each other more effectively (...) they have a more similar language so if they tell their classmates what they should improve, they will surely understand it better.” – Participant 25

Although with a more limited number of entries, it is also interesting to highlight that the participants also mentioned that PA is an enriching experience (3.55%, 16 entries), gives new perspectives and broads minds (3.33%, 15 entries), fosters collaboration (2.88%, 13 entries), encourages critical thinking (2.44%, 11 entries), and participants get more involved in the task (2.44%, 11 entries).

“...when we assess our colleagues' videos, we open our mind to different and new ways of teaching, so we can reflect about whether our teaching practice is adequate or not, and adjust it to what we have discovered.” – Participant 11

Focusing on the subcategory of *advantages related to the use of video-teaching*, a total of 66 entries were coded. Pre-service primary bilingual teachers participating in the study emphasise that PA using video-teaching is a good way to assess others (21.21%, 14 entries).

“Analysing videos is very suitable to assess the work of other teachers because since you have to execute both tasks [creating and assessing videos], when you make the video you will be very interested in making it perfect to receive good feedback.” – Participant 23

Moreover, PA using video-teaching is useful to assess the ability to communicate (15.15%, 10 entries), repeating videos helps PA (10.61%, 7 entries), and they can assess creativity and originality (10.61%, 7 entries), the use of ICT (9.09%, 6 entries), and the oral skills in the foreign language (6.06%, 4 entries).

“Analysing educational videos is a great way of assessing other teachers' work, due to the fact that it is an opportunity to evaluate the speech, the contents, the resources, etc. while having the opportunity to watch the video as many times as needed.” – Participant 30

Another subcategory identified in the study was *general limitations and concerns of PA*, where a total of 15 entries were coded. The participants showed mainly their concern with 'hurting' their peers (40.0%, 6 entries), followed by the lack of objectivity (33.33%, 5 entries), the concern that some people may not accept criticism (13.33%, 2 entries), their lack of experience on PA (6.67%, 1 entry), and the complexity of the task (6.67%, 1 entry).

“However, there might be some people that are a bit reluctant about this way of working. They may believe that this learning strategy could confront people because of how they face criticism.” – Participant 30

The fourth category of this study was *limitations and concerns related to video-teaching*, where 30 entries were coded. The most repeated concerns noted by the participants was that teacher-student interaction cannot be assessed (18.18%, 6 entries), and some elements like body language cannot be assessed either (18.18%, 6 entries). Moreover, the participants also highlighted other limitations and concerns, including that it requires previous preparation (12.12%, 4 entries), interaction among students cannot be assessed (9.09%, 3 entries), there is no improvisation (9.09%, 3 entries), they feel the pressure of the peers when recording to be peer assessed

(6.06%, 2 entries), they may have limited time in a limited format (6.06%, 2 entries), and there may be a lack of emotional component (3.03%, 1 entry).

“A video is not a good way to assess the work of teachers in most of the cases due to the numerous times they can record it, and also teachers can read the content. Besides, the worst thing is that students cannot see nonverbal language, so it produces a lack of understanding.” – Participant 45

Finally, the last category is entitled *recommendations and suggestions*, with a total of 6 coded entries. A total of 3 entries (50%) suggest that it is better that PA is anonymous to avoid conflicts. Moreover, other remarks are that it is necessary to combine videos with other types of assessment (33.33%, 2 entries), and it can complement face-to-face assessment (16.67%, 1 entry).

“But a point I would remark would be the anonymity of this [peer assessment], as it can create conflict between them [partners] in some situations.” – Participant 8

DISCUSSION

The current study analysed the responses of 58 pre-service primary bilingual teachers of the University of Córdoba (Spain) to elicit their perceptions, attitudes and concerns regarding PA. The results showed their interest and positive attitude towards PA as a way to improve their teaching performance. This perception is actually corroborated through research, as Sluijsmans et al. (2002) found that pre-service teachers who use PA outperform their peers that do not utilise it.

The participants also believed that PA was a very useful experience and technique, which is in line with previous research (Planas et al., 2014). Some respondents also highlighted that using videos for PA was a good way to evaluate their classmates as they could pay more attention to all the details in order to provide more detailed feedback. However, and despite the usefulness of PA for some students, we should be cautious: “whilst formative peer assessment can be a useful strategy for some students, it does not work as a strategy for all students and therefore cognisance of developing a range of methods of engaging students in the assessment process is required” (Vickerman, 2009, p. 226).

Contrariwise to previous research (e.g., Bryant & Carless, 2010; Papinczak et al., 2007), the respondents considered that PA provided them with relevant feedback, as their fellows had also done the same task and had a closer understanding of the difficulties they may have encountered: “I think peer assessment is very effective because the person sees another approach, another solution (...) many times people understand things better with the explanation of our peers than with that of another person from a different environment.” – Participant 36; “It is really useful to know the opinion of a person that is at the same level as you and deals with similar situations because we get reciprocity and constructive feedback with the only objective of improving.” – Participant 53.

Furthermore, the high percentage of teachers' positive attitudes could increase the possibility of using PA as a part of their future teaching performance, as Panadero and Brown (2017) suggested. Moreover, being the participants of this study pre-service teachers, the obstacles to use PA identified by Zhao (2018) regarding teachers' reluctance to change their practice could be easily overcome, as they would be familiar with this technique prior to begin their professional careers.

The main concern stated by the participants was the fear of hurting their peers, which is a common issue when analysing attitudes towards PA (e.g., Arnold et al., 2005; Pope, 2005). According to Chien et al. (2020), criticism feedback seems to be prejudicial for students' performance, which may explain why our sample is especially concerned with not hurting their peers emotionally. This perception is connected to the fact that classmates may not accept criticism, situation that could incur a peer's anger or disrupt relationships among teammates. The respondents were also worried about their lack of experience and the perceived complexity of PA, limitations that have also been identified in previous research (e.g., Moorthy et al., 2006; Ward et al., 2003). Moreover, and although seen as a secondary component of this research, the respondents also remarked some limitations that PA based on videos may have (i.e., lack of interaction, difficulties to assess body language, lack of the emotional component of teaching).

Finally, pre-service primary bilingual teachers need to develop a comprehensive understanding of PA as a tool to facilitate learning. This is essential due to recurrent anxiety towards PA (Topping, 2009), and discomfort when having their work evaluated by a peer (Hanrahan & Isaacs 2001). In order to avoid this initial reluctance, which can be due to the lack of experience on PA, a series of recommendations could be considered for pre-service primary bilingual teachers, namely:

- Emphasising that PA fosters personal responsibility (Topping, 2009).
- Explaining the assessment instruments prior to the PA process (Vickerman, 2009) and analysing a case together to clarify the assessment criteria (Sluijsmans et al., 2002).
- Unidirectional anonymity, by anonymising the assessors in PA (Vickerman, 2009), as a potential way to reduce peer pressure and fear of disapproval (Vanderhoven et al., 2015).
- Facilitating that at least two peers assess the tasks in cases of one-way PA (Planas et al., 2014), assigned in a randomised basis.
- Appealing to their future careers as teachers.

Furthermore, teacher training should foster the use of PA in order to avoid general learners' mistrust, which has been reported at different levels and across different educational contexts, including Spain (Planas et al., 2014). Despite their lack of confidence or the higher value given to the teacher's assessment (Ballantyne et al., 2002), it must be borne in mind that previous studies highlight that pre-service

teachers who utilise PA outperform their counterparts who do not use it, and this experience may also change their perceptions regarding instruction and assessment (Sluijsmans et al., 2002).

CONCLUSION

Nowadays, it is generally assumed that the assessment process must shift from being primarily unidirectional (i.e., from teachers to students) to multidirectional (including peer-to-peer and self-assessment), which entails that learners should be responsible for both their own learning and assessment processes (Ng, 2016). Considering that the use of PA is context dependant, and distinct techniques and strategies need to be discussed considering local and national systemic realities, the current study has explored Spanish pre-service primary bilingual teachers' perceptions on PA, revealing remarkable positive attitudes. Nevertheless, further studies should be developed especially in the field of bilingual teacher training due to their specific and complex features.

The findings presented in this paper should be interpreted in the light of two limitations. First, due to the nature of an exploratory study, as a starting point, only teachers located in one context, Faculty of Education of the University of Córdoba, were considered as target population. Consequently, the findings may not be applicable to other participants located in different contexts or with different backgrounds. Future research should consider recruiting participants from different institutions, countries and sociocultural contexts so comparisons with the current research could be performed. Second, the qualitative findings were only based on self-reported data, so they may be affected by respondents' subjective opinions about the topic. For this reason, future studies should also consider obtaining data through additional sources (e.g., questionnaires, focus groups, observations) in order to obtain more reliable data.

This study explored Spanish pre-service primary bilingual teachers' perceptions, attitudes and concerns regarding PA as a complementary tool for their teaching-learning processes. We consider that PA provides students with opportunities of learning not only from what other peers do, but also from the own process of evaluating other peers' work, which may improve their training as teachers. In this light and considering the scarce research regarding PA and bilingual education, teacher trainers and researchers are encouraged to implement more PA activities to acquire more insights about the effects of using PA for pre-service bilingual teacher training.

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