Modalidades de Aprendizaje para la Innovación Educativa

Universidad de Oviedo

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Exploring the potential of video for the improvement of pre-service EFL and bilingual teachers' linguistic competence

Francisco Javier Palacios-Hidalgo, Cristina Díaz-Martín, María Elena Gómez-Parra y Cristina A. Huertas-Abril

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1. Introduction

Language and bilingual education teachers play a key role in the development of students' linguistic competence and communication skills, both of which are essential objectives of today's education (Council of the European Union, 2018, 2019). Therefore, it seems evident that teachers need to be proficient in the language they teach, including oral, written, productive and receptive skills, to effectively develop their teaching practice. However, research has shown that there is a need to improve certain aspects of the linguistic competence of teachers of English as a Foreign Language (EFL) and bilingual education, such as their oral skills (Trigo-Ibáñez et al., 2021) and especially their pronunciation (Palacios-Hidalgo et al., 2023).

In addition, different studies have proven that self- and peer-assessment can contribute to improving teaching practice (Wanner & Palmer, 2018) and, in particular, the training and future work of pre-service EFL and bilingual education teachers (Huertas-Abril et al., 2021). Moreover, video has been demonstrated to be a powerful tool for enhancing the professional identity of bilingual education teachers (Díaz-Martín & Gómez-Parra, 2022) and the training of EFL professionals (Karakaş & Yükselir, 2021). Nevertheless, there are no investigations, up to the researchers' knowledge, that consider how a combination of video and self- and peer-assessment can improve the linguistic competence and teaching practice of future EFL and bilingual education teachers.

Considering the aforementioned, this study explores the potential of video as a self- and peer-assessment tool for the improvement of the linguistic competence and teaching practice of pre-service primary EFL and bilingual education teachers. To this end, two research questions were formulated:

- RQ1. How do pre-service primary EFL and bilingual teachers assess their own linguistic competence and teaching practice and those of their peers?
- RQ2. To what extent does the use of video allow self- and peer-assessment of the linguistic competence and teaching practice of pre-service primary EFL and bilingual teachers?

2. Materials and methods

This exploratory study follows a mixed-method, descriptive, and cross-sectional design, aiming to examine the relationship between the research sample and variables at a certain point in time. Cross-sectional studies "are suitable for generating hypotheses and may provide information about the prevalence of outcomes and exposures that informs other study designs" (Wang & Cheng, 2020, p. S66).

2.1. Context and participants

This study was developed as part of the teaching innovation project "Trabajando la praxis de futuros docentes a través del uso de herramientas de vídeo: Mejora de la competencia lingüística de los estudiantes de Educación Primaria y Estudios Ingleses de la Universidad de Córdoba / Working on the praxis of future teachers through the use of video tools: Improving the linguistic competence of Primary Education and English Studies students at the University of Córdoba" (ref. no. 2021-2-4002), granted in a competitive call by the University of Córdoba (Spain) during the 2021/22 academic year. The project aimed to improve the linguistic competence and teaching practice of pre-service EFL and

bilingual education teachers through the use of video tools, and consisted of five stages: (1) delivering simulated EFL/bilingual education lessons, (2) recording of simulated EFL/bilingual education lessons, (3) analysis of the recorded lessons, (4) self- and peer-assessment of the recorded lessons, and (5) interviews with the participants to examine their perceptions of the benefits of the experience.

As part of the project, and after the delivery, recording, and analysis of the simulated lessons, the present study was conducted to assess to what extent video had benefitted the linguistic competence and teaching practice of the participants. Non-probabilistic convenience sampling was used, in which "members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study" (Etikan et al., 2016, p. 2). In this case, all the participants were enrolled in the course "Foreign Language for Primary Education Teachers", which is part of the 3rd year of the Degree in Primary Education and the Double Degree in Primary Education and English Studies, both of the University of Córdoba (Spain) and had participated in the teaching innovation project. A total of 60 pre-service EFL and bilingual education teachers participated in the study, of whom 15 % (n = 9) were men, and 85 % (n = 51) were women.

2.2.Instruments

Two instruments were used in the study. For the quantitative part, an assessment rubric was designed after an exhaustive literature review of published studies in the field of linguistic competence and oral production in EFL and bilingual education settings, as well as a revision of other research instruments created for similar purposes (e.g., Huertas-Abril, 2018; López et al., 2021; Mashhadlou & Izadpanah, 2021). After the initial stage of design, the instrument was revised by the members of the research team, paying special attention to the clarity and relevance for the aim of the study of the proposed items, as well as for the levels of assessment established for each, until consensus was reached. The final version of the rubric consists of three dimensions: (1) demographic information, (2) self-assessment, and (3) peer-assessment. Items in the second and third dimensions include the following aspects: delivery, content and organization, grammar and vocabulary, and fluency. Cronbach's alpha was calculated to test the rubric's internal consistency and reliability; the result of the test (α = .804) showed fairly high consistency of the instrument (Taber, 2018). Exploratory factor analysis (through Kaiser-Meyer-Olkin –KMO– measure of sampling adequacy and Bartlett's sphericity test) and confirmatory factor analysis (using Promax rotation with Kaiser normalization) were also applied to the instrument to test the interrelation between the variables (IBM Knowledge Center, 2019). The KMO measure resulted in a value of .779, whereas the significance obtained from Bartlett's test was .000, which shows the interrelation between the variables (Field, 2013). After such analyses, the validity of the design rubric can be assumed as the two components correlate with each other (self-assessment value = 1.000; peer-assessment = .365).

For the qualitative part, a structured interview designed ad hoc was used. Its creation was based on the previous literature review developed, as well as on the researchers' knowledge of topic of study and the characteristics of the respondents. The initial version of the interview was validated by a panel of experts in the field of study using the Delphi method (Keeney et al., 2001). The final interview consisted of three questions: (1) How has this experience with videos helped you improve your linguistic competence?; (2) How has this experience with videos helped you improve your teaching practice?; and (3) Would you like to use videos again to improve your teaching practice?

Both the rubric and the interview were distributed online via Google Forms to facilitate reaching the respondents and gathering and organizing their answers. Before submitting their responses, participants gave written consent to participate in the study

.

2.3.Data analysis

Quantitative data were analyzed using SPSS V25.0 for MacOS. Kolmogorov-Smirnov test was applied to the instrument to determine whether the sample followed a normal distribution. After applying

Lilliefors correction, the level of significance was $p < 0.05$; therefore, the sample was assumed to follow a non-normal distribution (Steinskog et al., 2007). Considering this, non-parametric Spearman ρ test was applied to test the potential correlation between the variables (Field, 2013).

As for qualitative data, Grounded Theory was used to obtain the first approach to the phenomenon under study (Mirhosseini, 2020). Then, the main themes related to the potential of video for the improvement of pre-service teachers' linguistic competence were identified in the responses and based on these, a mind map was developed. Subsequently, content analysis was developed to fully understand the perceptions of the participants regarding the benefits of the experience for their linguistic competence. In this case, Atlas.ti v8.4.3 for MacOS was employed.

3. Results and discussion

This section presents a description of the results of the quantitative and qualitative data analyses

.

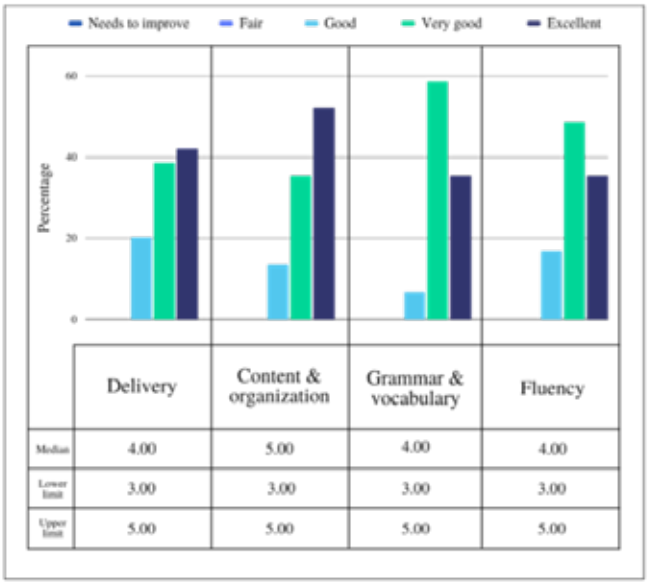
3.1. Pre-service teachers' self- and peer-assessment of their linguistic competence and teaching practice

General Results of Self-Assessment and Peer-Assessment

Figure 1 shows the descriptive results of the rubric items related to self-assessment, including the values of median, lower limit, and upper limit:

Figure 1

Descriptive results of 'self-assessment'



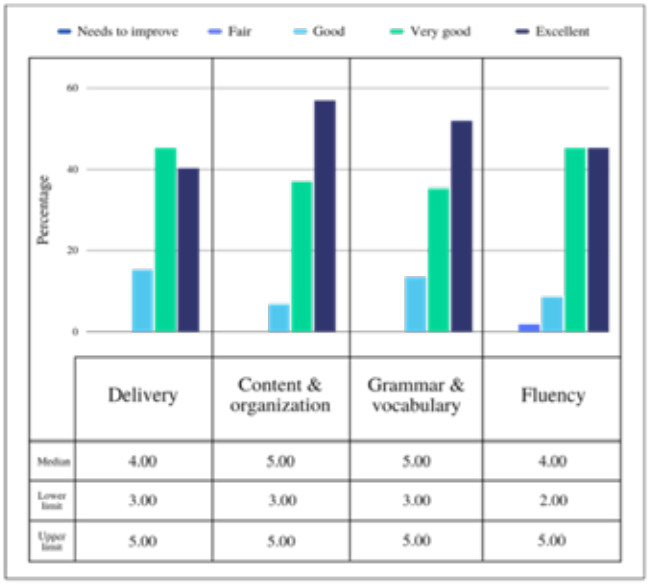
	Delivery	Content & organization	Grammar & vocabulary	Fluency
Median	4.00	5.00	4.00	4.00
Lower limit	3.00	3.00	3.00	3.00
Upper limit	5.00	5.00	5.00	5.00

As presented in Figure 1, the median for the four considered aspects ranged from 3 ('good') to 5 ('excellent'), which shows that participants had positive self-perceived linguistic competence. In particular, content and organization appeared to be the most positively valued aspect according to their responses.

Similarly, Figure 2 presents the results of the items related to peer-assessment, including the values of median, lower limit, and upper limit:

Figure 2

Descriptive results of 'peer-assessment'



As with self-assessment, the median for the majority of the aspects of peer-assessment ranged from 3 ('good') to 5 ('excellent'), as shown in Figure 2. The aspects of peer-assessment that were most positively valued by the participants were content and organization and grammar and vocabulary.

Correlation Between Self-Assessment and Peer-Assessment

Finally, it appears relevant to test whether the variables related to self-assessment correlated with those related to peer-assessment. Table 1 shows the results of the Spearman's ρ test, which was calculated for this purpose:

Table 1

Correlation between self-assessment and peer-assessment

			Peer-assessment			
			D	CO	GV	F
Self-assessment	D	ρ	.376**	.266*	.313*	.180
		sig.	.003	**.040**	**.015**	.169
	CO	ρ	.392**	.321*	.444**	.124
		sig.	.002	**.012**	**.000**	.346
	GV	ρ	.284*	.277*	.264*	.167

	sig.	**.028**	**.032**	**.042**	.203
F	ρ	.207	.239	.258*	.185
	sig.	.113	.066	**.046**	.158

Note. D = delivery; CO = content and organization; GV= grammar and vocabulary; F = fluency. * = significant correlation when sig. < 0.05; ** = significant correlation when sig. < 0.01. Significant differences in bold. Own elaboration.

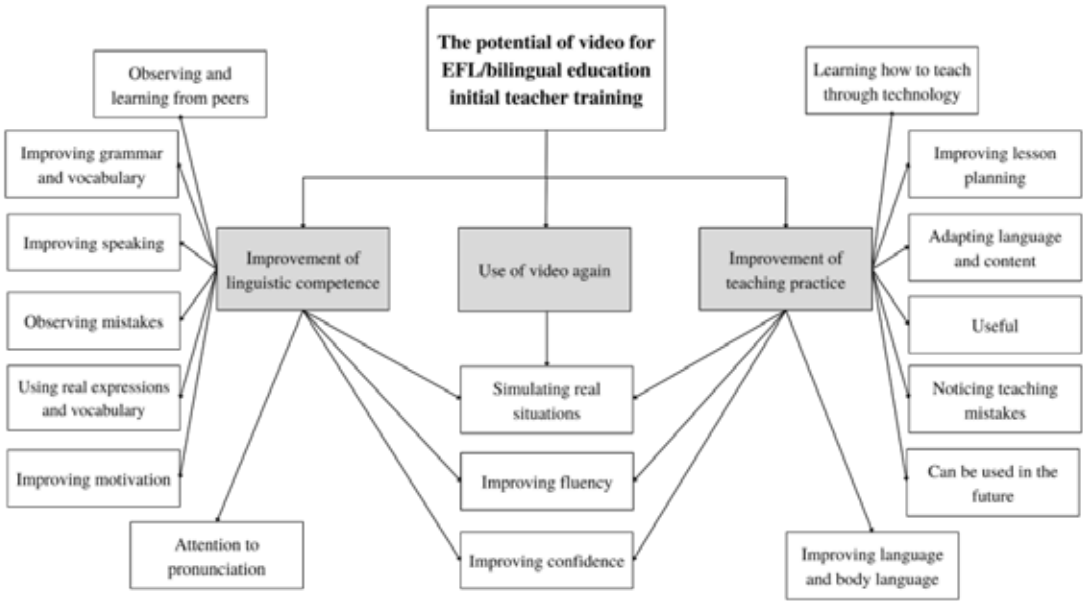
As shown in Table 2, there is a positive correlation among all considered variables (Minitab, 2022). Nevertheless, such correlations are only statistically significant in the following cases (Dancey & Reidy, 2020): (i) self-assessed delivery is moderately correlated with peer-assessed content and organization, and weakly correlated with peer-assessed grammar and vocabulary; (ii) self-assessed content and organization is weakly correlated with peer-assessed content and organization as well as with peer-assessed grammar and vocabulary; (iii) self-assessed grammar and vocabulary is weakly correlated with peer-assessed delivery, and also moderately correlated with peer-assessed content and organization and peer-assessed grammar and vocabulary; and (iv) self-assessed fluency is moderately correlated with peer-assessed with peer-assessed grammar and vocabulary.

3.2. The potential of video for pre-service teachers' self- and peer-assessment of their linguistic competence

Three categories were identified from the participants' responses to the interview: (1) improvement of linguistic competence, (2) improvement of teaching practice, and (3) future use of video. Figure 3 shows the mind map developed based on Grounded Theory (Mirhosseini, 2020) after coding and categorizing participants' responses to the interview, including the three aforementioned categories as well as the different sub-categories identified:

Figure 3

Coding categories



As presented in Figure 3, the subcategory "simulating real tasks" was found to be common to the three categories identified. Similarly, the subcategories "improving confidence" and "improving fluency" were found to be common to the respondents' improvement of both linguistic competence and teaching practice. These three subcategories were the most repeated in the participants' responses, as shown in the following coded reference:

Speaking English in front of people is very complicated for me and makes the development of this much worse than doing it on video without people watching me, so I think my language proficiency has been much better and fluent in this case. (Reference 136).

Other aspects that were highlighted by the participants were the potential of video for "improving grammar and vocabulary", "paying attention to pronunciation" and "observing and learning from peers", which, according to their responses, were important benefits for their linguistic competence:

I think that [the experience] helped me know how and what vocabulary [I need to] use and get more fluent to explain. (Reference 59).

Having to use the language fluently to explain content undoubtedly makes us work on our speaking [and pronunciation] as well as on the organization of content and the use of grammar and vocabulary. (Reference 150).

As for the improvement of their teaching practice, the subcategories "learning how to teach through technology" and "improving lesson planning" were significantly repeated in the responses:

I thought that doing sessions in this way was much easier, but it has not turned out to be so. You have to fix many details and really think about what you want to teach and how to do it. Thanks to this, I have been able to experience what it is like to teach in virtual sessions. (Reference 88)

4. Conclusiones

This study has attempted to explore the potential of video as a self- and peer-assessment tool for improving the linguistic competence and teaching practice of pre-service primary EFL and bilingual education teachers. To do so, a video-based training experience was organized, and both quantitative and qualitative analyses were carried out, which were used to examine how future teachers assessed their linguistic competence and that of their peers, and what they thought about their experience using

video tools. In general, the participants agreed with the potential of video to enhance their linguistic and teaching skills.

At this point, it seems necessary to respond to the research questions of this study. As for RQ1, pre-service primary EFL and bilingual teachers positively assessed their own linguistic competence and teaching practice, as well as those of their peers. In the case of self-assessment, content and organization was the most valued aspect, whereas fluency was the least according to participants (see Figure 1). As for peer-assessment, both content and organization and grammar and vocabulary were the best valued elements, while fluency continued to be considered the worst aspect of linguistic competence (see Figure 2). Significantly, the qualitative analysis confirmed that improving grammar and vocabulary was one of the best benefits of using video; however, the improvement of fluency, which was negatively assessed in both self- and peer-assessment, was highlighted as another of the assets of video tools (see Figure 3). It is also worth mentioning that, according to the responses, video can also help improve pronunciation, which contradicts the findings of other studies showing that future EFL and bilingual education teachers have important training needs in this respect (Palacios-Hidalgo et al., 2023).

In relation to RQ2, the study has proven that video allows self- and peer-assessment of the linguistic competence and teaching practice of pre-service primary EFL and bilingual teachers. This is in line with previous research revealing that videos are powerful tools for teacher training and improvement in the context of EFL and bilingual education (Díaz-Martín & Gómez-Parra, 2022; Huertas-Abril et al., 2021; Karakaş & Yükselir, 2021).

This chapter has shown that video can certainly help improve the linguistic competence and the future teaching practice of pre-service EFL and bilingual education teachers. Despite its limitations (which include the exploratory nature of the study, the limitation to a single context, and the reduced number of participants), the study must be considered as the first approach to the examination of video tools for the linguistic and methodological preparation of teachers. Ultimately, this work aims to encourage teacher educators and institutions to reflect on the potential of video and self- and peer-assessment for the training of future language teachers.

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