

Using mobile devices and the Adobe Connect web conferencing tool in the assessment of EFL student teacher performance

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Abstract. This paper describes a project to use mobile devices and video conferencing technology in the assessment of student English as a Foreign Language (EFL) teacher performance on teaching practice in Ecuador. With the increasing availability of mobile devices with video recording facilities, it has become easier for trainers to capture teacher performance on video without recourse to expensive purpose-made video camera equipment and time-consuming editing of video material. Mobile devices and web conferencing tools enable trainers who may be widely separated geographically to share video material of student teacher performance as the basis for the calibration of classroom practice assessment. Ecuadorian EFL teacher trainees on teaching practice were recorded using mobile devices. Videos were then uploaded to a video sharing website and made available to all participating trainers. Using the Cambridge ESOL Teaching Knowledge Test (TKT) score criteria, teacher trainers were asked to rate student performance as captured in the video sequences using the four band rating scale (1-basic; 4-very good). The video material then served as the basis for an online discussion and calibration of student teacher performance using the Adobe Connect web conferencing tool. Trainers were then asked to evaluate the efficacy of mobile device-recorded video material and web conferencing platforms as instruments in the assessment of student teacher performance.

Keywords: teaching practice, mobile phone, Adobe Connect.

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1. Introduction

1.1. General

Programmes of EFL teacher accreditation have become increasingly international, with standardised assessment forms available for the assessment of student teacher performance for the teaching practice/practicum component. The assessment of classroom performance is complex and involves simultaneous considerations of learning atmosphere, learner interaction and involvement, language and skills focus, classroom management and learner monitoring/feedback. Assessment forms for programmes such as the Cambridge ESOL TKT, CELTA and DELTA offer trainers the advantage of a set of rigorous, internationally-benchmarked criteria, tying lesson planning to the observation and assessment of classroom performance. While language teachers have frequently been seen as technological innovators among their educational peers, the use of technology in the assessment of student teacher performance in the classroom has received less attention in the literature. Modern digital technology in the form of mobile device cameras and video editing enables teacher trainers to capture permanent records of teacher performance for evaluative purposes. These performance records can be compared and evaluated using online forums and video conferencing tools to promote a more objective calibration of teacher trainer assessment.

1.2. Aim

This paper describes the use of a combination of technologies (smartphone, the *Adobe Connect*, video conferencing tool) in the assessment and calibration of classroom pre-service teacher performance in Ecuador. Student teachers engaged in peer-microteaching activities were filmed by their trainers using smartphones, with the video records uploaded to a Moodle forum. Unedited classroom performance captured in the video clips was then assessed amongst the authors using the criteria and 1-4 band assessment rating scale of the TKT. Similarities and discrepancies in ratings were then discussed using the *Adobe Connect* video conferencing tool.

1.3. Peer-microteaching

McKnight (1980) defines microteaching as “a scaled down realistic classroom training context in which teachers, both experienced and inexperienced, may acquire new teaching skills and refine old ones” (p. 214, quoted in Millis & Smojlowicz, 2006, p. 1). Peer-microteaching enhances the value of the interaction

between trainers, student teachers and peers collaborating in reflective teaching training practice. This technique is often used in Teaching English as a Foreign Language (TEFL) accreditation programs to assess student teachers.

Student teachers participated in peer-microteaching lessons videoed on a mobile device for formative assessment purposes. Their “performance skills, cognitive processes and affective learning” in Wallace’s (1991, p. 98) terms were determined to assess the extent to which trainees had developed their abilities to design, create, implement and assess a reading lesson according to the TKT assessment form. In this respect, Egbert (2005) points out the relevance of assessment in language teaching and learning when she states that assessment “provides feedback from peers and others; formally, it provides information against a standard regarding how the student is progressing in specific areas” (p. 119).

1.4. Video and mobile phone video use in teacher training

Video can be used to film a teacher’s performance “on one or two video cameras, either of the portable kind in an ordinary classroom, or standard cameras in a studio” (Wallace, 1991, p. 101). Cooper, Lavery and Rinvuluceri (1991) see this tool as a “supercharged medium of communication and a powerful vehicle of information” (p. 11). Videos preserve a record of teaching performance that can be analyzed and assessed systematically for further applications. Video is therefore a reliable (in testing terms) medium in assessment and feedback procedures that might otherwise be time consuming due to unsystematic data collection and/or a lack of information regarding teaching background and classroom context. In recent years, video recording and editing has become possible via mobile devices. Mobile phone video and sound recording quality have improved rapidly with higher image definition and enhanced sound sensitivity conducive to the recording of complex classroom interactions.

1.5. Adobe Connect as a discussion forum

Adobe Connect is a widely used video conferencing tool which has been extensively adopted in higher education. This tool permits informal online meetings, small group collaboration and larger webinars, enabling collaborators to interact with each other using video and sound as well as sharing desktops. For this particular project, the main advantage of *Adobe Connect* is to bring together teacher trainers in Ecuador and Sweden by providing a forum for real-time reflection and discussion of student teacher video performance, as a natural extension to a *Moodle* forum.

2. Method

2.1. Participants

Ten student teachers who were enrolled on a TEFL course offered at an Ecuadorian university participated in this study. The student teachers, aged between 20 and 40 years, were following the second of three modules as part of their programme: teaching reading and writing. All teacher students had Spanish as their L1 although they adopted the policy of using English at all times in the classroom, in line with the principles of communicative language teaching.

2.2. Procedure

Teaching sessions were recorded by one of the authors sitting in a fixed position at the back of the classroom, using a smartphone to record student teachers engaged in microteaching activities. Following each microteaching session, smartphone videos were uploaded to a computer. Feedback was given once all the presentations were finished.

Video materials were then uploaded to *Box*, a secure cloud storage facility. Using *Adobe Connect*, the assessors had several online meetings regarding the scores given to the students. These meetings served as the basis for discussing ratings of student teacher performance as well as evaluating the technology (mobile device, VLE, *Adobe Connect*, etc.) used.

2.3. Recording device

The device used to record students was a smartphone with Android 4.1 as the operating system.

The smartphone had a 3.5 inch display, 320 x 480 pixel resolution, 512 Mb RAM, 5 megapixel camera and a 4 GB storage facility. Video material was saved in the *.mp4* format.

2.4. Evaluation criteria

In order to assess student teacher performance, the Cambridge ESOL TKT rubric was used. The appendix shows the criteria which are divided up into the assessment of the lesson planning (criteria a- e), which match with the assessment of classroom performance (criteria f-j).

3. Results and discussion

The results set out below include the ratings of the three assessors (*T1*, *T2* and *T3* etc) using the TKT band scale (see Table 1). Lesson plan ratings (a-e) are included here for the sake of completeness; the main focus of this paper is the lesson observation criteria (f-j). For each video, the standard deviation (*SD*) or σ of the total scores for each video was calculated, to show the extent or dispersion in ratings between the assessors around the mean rating for each video. The same calculation was performed for each of the *TKT* criteria; σ is listed on the extreme right, indicating the degree of dispersion for ratings of each of these criteria.

Table 1. Comparison of TKT ratings 1-4 of teacher performance between the three assessors

Assessor	Video I			Video II			Video III			Video IV			Video V			SD	
	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3		
TKT criteria																	
Lesson plan																	
a. Write clear aims	2	0	2	3	1	3	1	4	2	3	1	3	0	0	0	0	1.35
b. describe lesson components	2	3	2	3	3	3	2	3	2	3	3	2	0	0	0	0	1.16
c. order stages / components	2	2	3	4	3	2	4	2	3	4	3	0	0	0	0	0	1.39
d. analyse target language skills	2	3	2	3	3	2	1	4	1	3	4	1	0	0	0	0	1.39
e. plan use of resources	3	4	2	3	3	3	1	4	2	4	4	3	0	0	0	0	1.50
Lesson observation																	
f. create positive atmosphere	3	4	3	4	4	3	2	4	3	3	4	3	0	3	2	0	1.07
g. focus on form / skills	2	4	2	3	4	3	1	4	1	3	4	3	0	4	4	0	1.35
h. classroom management	3	4	3	3	4	3	2	4	2	3	3	3	0	4	4	0	1.15
i. appropriacy of English usage	3	4	3	3	4	3	2	3	2	4	4	4	0	4	4	0	1.19
j. monitor learners	2	4	3	2	4	3	2	4	2	3	4	3	0	2	1	0	1.18
Totals	24	32	24	30	34	29	16	38	19	32	35	28	0	17	6		
SD	4.62			2.65			11.93			3.51			8.62				

The results showed the greatest agreement (and smallest *SD*) among the assessors for video II and VI respectively, with relatively wider dispersions in ratings for the remaining videos. One possible explanation here is that the assessors were using the very specific TKT criteria for the first time; these criteria and the Cambridge ESOL reporting forms had yet to be fully integrated into the TEFL programme. Despite these discrepancies, the results indicate the potential for mobile phone video in the assessment of student teachers, provided that a set of benchmarked criteria like the TKT guidelines are adopted at an early stage and firmly anchored in the programme from the start.

The most important finding, however, was the overall positive evaluation of the smartphone as a means of capturing a permanent record of student teacher performance. Compared with purpose-made video cameras, trainers expressed the view that they were more readily familiar with recording and uploading functions of smartphones from everyday use and uploading to social media. Audio and video quality were evaluated as being minimally sufficient for recording the complexities of teacher-learner and learner-learner interactions in the language classroom. Nevertheless, it was agreed that the assessors were too static in their classroom

observation points and needed to utilise more fully the mobility of hand-held devices in their recording.

Trainers pointed to the alternative possibility of recording shorter teaching sequences as a showcase of classroom teacher performance (e.g. starting a lesson, transitions between different activities, whole class and group task/pairwork, etc.) in a series of lessons with alternative recording positions and angles. These sequences could then be viewed separately to provide formative feedback throughout the practice or alternatively combined as a single summative assessment. *Adobe Connect* was also seen as a potentially useful medium for the realtime discussion of performance assessment discrepancy. However, bandwidth considerations are an issue here, especially when reviewing teacher performance videos in the sessions using *Adobe Connect*'s screensharing facilities.

4. Conclusion

Overall, this pilot project has indicated the usefulness of the mobile phone/online forum/web conferencing tool combination in the assessment of student teachers on teaching practice. There is considerable potential for this approach in online teacher training programmes involving far-flung student teachers, where trainers may not be able to perform regular classroom observations in person, relying instead on video recording of classroom performance matched with documented lesson planning.

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Appendix TKT lesson planning and observation form

The lesson plan- the candidate can:		Score
a.	Write detailed, clearly stated and appropriate main aims, subsidiary aims, aims for individual stages in the lesson and personal aims.	
b.	Give adequate details of the different components of a lesson plan such as information about the class; procedures; timing, interaction patterns; anticipated problems with materials, activities and tasks; suggested solutions.	
c.	Give details of stages, activities and tasks which are logically ordered and which are appropriate to the learners and the lesson aims.	
d.	(i) analyse target language, including aspects of form, meaning and phonology; anticipate possible solutions relating to the analysed language; and (ii) identify appropriate strategies to develop the target skills / subskills; anticipate problems and suggest solutions relating to the identified skills.	
e.	Plan the use of appropriate (referenced) materials and / or resources to be used.	

The lesson - the candidate can:		Score
f.	Create a positive learning atmosphere, ensuring involvement of all the learners.	
g.	(i) focus on language: form, meaning and phonology, and include appropriate practice; and (ii) follow appropriate procedures and use activities to improve learners- skills.	
h.	Set up, manage and time whole-class and individual, pair or group activities, using materials, resources and aids effectively to deliver the planned lesson so that aims are achieved.	
i.	Use English appropriately eg when explaining, instructing, prompting	

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