

Fostering Reflective Practice: Using Smartphones to Video Teacher Training

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スマートフォンは私たちの生活の至る所で利用されている。ほとんどの人がスマートフォンを所有し、それには様々な機能が備わっている。しかし、教育者にはスマートフォンの主要機能は多くの場合マイナスだと捉えられている。学生たちは授業中に友人にメッセージを送ったりネットサーフィンやゲームをして、大抵の場合教師たちの教育努力に集中していない。これは大ざっぱな一般論で、勿論すべての学生がそうとは限らない。しかし、スマートフォンは教育にマイナスの影響を及ぼすというのが一般的な印象である。ではどのようにすればスマートフォンを良い形で利用できるだろうか。この論文では、教員養成プログラムにおいて振り返りを促すために、スマートフォンを積極的に使用方法を提案する。

Smartphones are now a ubiquitous part of our lives. Most people have one and they have a variety of functions but, as educators, their primary function is often seen as negative. Our students spend their time during lessons texting their friends, surfing the net, playing games and, generally, not concentrating on our attempts to educate them. This is a sweeping generalization, obviously not all students are like this, but the general impression is they have a negative effect on education. So how then can they be used in a positive way? This paper suggests one way in which smartphones can be used positively to encourage reflective practice in a teacher training program.

Introduction

Since Schön (1983) introduced the idea of the reflective practitioner,

reflection has become an important part of many teacher training programs. Reflective practice encourages a professional to ‘reflect on the phenomena before him, and on the prior understandings which have been implicit in his behaviour. He carries out an experiment which serves to generate both a new understanding of the phenomena and a change in the situation’ (Schön, 1983, p.68). It not only includes reflection but also action, and, therefore, encourages professional development.

In recent years video has been used in teacher training programs to facilitate this reflection ‘because of its unique capacity to capture the richness and complexity of classroom activity’ (Gaudin & Chaliès; 2015, p.43). A number of studies have shown how using video to reflect has helped teachers to evaluate their teaching. Tripp & Rich (2012, p.729) summarised the effects of using video to reflect, teachers were able to:

- a identify gaps between their beliefs about good teaching and their actual teaching practices
- b articulate their tacit assumptions and purposes about teaching and learning
- c notice things about their teaching that they did not remember
- d focus their reflections on multiple aspects of classroom teaching
- e assess the strengths and weaknesses of their teaching

As has been discussed the use of reflective practice and video in teacher training is widespread but this has not been without criticism. Collin, Karsenti & Komis (2013) while acknowledging the widespread use of reflection, argue that its definition is not clear and that this affects how it is put into practice in teacher training programs. This lack of clarity is compounded by the fact that the trainee teachers have limited knowledge of the teaching profession and may not be able to notice the relevant events in the videos. Clearly, the criteria for

reflection need to be established and the trainee teachers made aware of them.

Video can be used to initiate reflective practice but as Gaudin & Chaliès (2015, p.57) have mentioned we need to ‘create a “continuum” between teacher education programs and professional development programs in such a way that video viewing becomes a routine, familiar professional practice...over the course of an entire teaching career.’ In many teaching situations this video is done using video cameras but the problem, it seems to me, is that the video is not the property of the trainee themselves but the institution to which they belong. There is also the issue of the use of reflection by the institutions to assess the performance of the participants in their programs. As Hobbs (2007, p.410) states ‘it is instinctual to downplay one’s faults and accentuate one’s strengths when being assessed or analysed. When one is asked to reflect on his/her strengths and weaknesses as part of a required, graded course assignment, it seems, then, that genuine examination of self is already a lost cause.’ The practitioners need to be encouraged to see reflective practice not as a means of assessment but as a system of self-development.

If we are to encourage a continuum of reflective practice we need to make it easier for teachers to access the videos and systematically and truthfully reflect on their practice. This, I believe, can be achieved through the use of smartphones. Smartphones are not able to capture as much detail as more sophisticated video cameras, but they do not require as much setting-up, are portable, and can help to personalize the process of reflection. These are factors which could facilitate a long-term practice of reflection.

The data is ‘owned’ by the practitioners and as Mann and Walsh (2017, p.34) have suggested ‘where there is ownership of the data there is more likely to be a change in teaching behaviour, since teachers are more engaged when they use data from their own context and experience.’ Mann and Walsh go on to call for a systematic approach to

reflective practice, which is data-driven, and suggest video as a means to capture the rich variety and complexities of the classroom.

The aim of this paper is to discuss the efficacy of using smartphones to video teacher training sessions and whether they help to facilitate reflective practice. It also highlights the type of reflection the participants focussed on and suggests a framework which could be utilised to promote more detailed and structured reflection in the future.

The specific research questions are:

1. Do smartphones help to facilitate the process of reflective practice in teacher training?
2. What types of reflection do pre-service teachers focus on when they view their teaching practice?
3. What can be done to help improve this process of reflection?

Procedures

This research was conducted over the course of a 14-week semester. The participants were enrolled in a course in a Japanese university which was concerned with preparing teachers to teach English in schools in Japan. The course is part of a program whose final goal is the achievement of a Japanese teacher's licence.

The class consisted of 25 students and at the start of the semester they were asked if they would like to take part in a research project involving the use of smartphones. It was stressed their participation would be anonymous and that it had no bearing on their grade. 21 students agreed to take part and they signed forms of consent as per ethical guidelines.

The primary focus of the course was communicative language teaching (CLT). The first four classes discussed the theory of CLT,

then the final 10 classes involved the introduction of a range of skills, and different ideas and theories about how to teach them. The skills that were discussed were vocabulary, grammar, reading, listening, and writing. One week they would have an input session about the teaching of the skill and the next they would be put into groups of 4-6 members and be expected to teach a 15-minute lesson to their peers based on that skill. These microteaching sessions were recorded using the trainee teachers' smartphones and then they were expected to watch the videos and complete a reflection sheet. These were emailed to me and the videos shared. I would then watch the videos and give the students feedback.

Results and Discussion

1. The use of smartphones as a tool for reflective practice.

The smartphones were used to capture the participants' microteaching sessions and, although the videos were useful in facilitating reflection, there were some issues connected with their use.

As the smartphones were not fixed the people taking the videos could move around and record not only the interaction between the teacher and students but also the students and the materials being used. This enabled 'rich' data to be collected but this had a drawback as in the classroom there were various groups recording at the same time so the phones would sometimes also record the voices from other groups. Especially, this was an issue if you had a teacher who was quietly spoken and another who was louder and so their voice became more dominant on the recording. This was a minor problem and could be simply solved by using different classrooms, or having the participants record at different times, but the main problems were not physical, they were the technical issues concerned in using smartphones.

The videos that were recorded were usually more than 1 gigabyte and this large file size was an issue if the participants had limited memory on their phones. Their phones might not have enough capacity to record the teaching practice. This issue was dealt with by having some Ipads available that could be used to record their teaching. I would then mail them the videos so they could complete the reflection. However, the other issue concerned with the size of the files was more difficult to solve and that was how to store the videos so that I and the students could access the files. There were 21 students who reflected and videoed five different classes so both for the individual students and myself this required a large amount of storage. In my case I used Dropbox to store the files but some of the participants told me that they had to delete 'older' teaching videos in order to have enough capacity on their phones to record 'new' ones. This was contrary to my goal in using smartphones as I believed that one of the advantages of using them was giving them the ownership of the videos so that they could continue to reflect and develop as teachers in the future.

In conclusion, the smartphones helped the student teachers to take ownership of the reflection process, allowing them to collect rich data but there were technical issues which caused some problems. However, the fundamental concern was whether the participants could effectively use the videos to reflect on their teaching practice and the reflections they made will be discussed in the next section.

2. The participants' reflections

Table 1: Most common types of reflections made (percent)

	Vocabulary	Grammar	Reading	Listening	Writing	Total
	%	%	%	%	%	%
Teacher/Student Interaction	61.5	53.6	40.4	43.6	51.9	50.2
Teaching materials	7.7	8.93	13.5	20	21.15	14.23
Lesson Structure	0	10.7	7.7	10.9	15.4	8.99
Student/Student Interaction	0	7.14	13.5	10.9	7.7	7.86
Time management	9.6	3.57	9.6	7.2	0	5.99
Stance and movement	7.7	5.35	5.77	0	0	3.75
Voice	3.85	5.35	1.9	3.6	1.9	3.37
L1	3.85	3.57	1.9	0	1.9	2.25
English confidence	1.9	1.79	3.85	1.8	0	1.87
Class Preparation	3.85	0	1.9	1.8	0	1.5

Table 1 shows the types of reflection that the students made about their videos. This data comes from the written reflection sheets that were completed after the microteaching sessions on vocabulary, grammar, reading, listening, and writing. I examined the data and identified the most frequent themes that the participants identified and, as can be seen, by far the most frequent source of reflection was the interaction between teacher and student with just over half of all reflections.

These reflections on teacher and student interaction focussed on a variety of different aspects as can be seen from this example from one of the participants:

Problem Details:

I am not used to encouraging the students by saying “Great,” “Good job” and other words so I can see my hesitation to use those words.

Goal Details:

To be able to encourage students by using such words and not hesitate to use those words.

Improvement Method:

Increase my vocabulary to encourage students and practice it verbally so I will be able to use them.

In the example above the student teacher is concerned that she is not encouraging the students enough but it is interesting that she doesn't mention her English ability as the cause. I would have expected the participants to be more conscious of their ability to teach a language in their L2 and about a perceived lack of ability to express themselves in English but as can be seen from Figure 1 their confidence in English was not one of the common types of reflection. In fact, rather than their L2 ability causing problems when they were teaching, the student teachers mainly reflected on their ability to organise and manage a class as can be seen from the extracts below:

Problem Details: Some students were confused with how to make pairs and their roles that they have to play first. And I tried hard to explain it.

Goal Details: How to make pairs and start the activity is not written on the handout, but I need to prepare for it carefully. Also I should think about what I can do when only some pairs finish the activity fast and they have nothing to do.

Improvement Method: Imagine and practice how to manage activities more smoothly. I also can do activities by myself as a demonstration in advance.

Problem Details: I did not know how to conclude the class so I ended the lesson saying “well, that the end of the class!”

Goal Details: Make sure to conclude the lesson well.

Improvement Method: I need to conclude the whole lesson plan at the end. Maybe go over the words again and ask whether anyone has a question or not.

As the extracts highlight the student teachers seemed to be reflect on the mechanics of teaching; organizing groups, introducing and concluding activities, and giving encouragement, rather than any theoretical issues which were discussed in the course on CLT. This is natural as for student teachers teaching in their L2 the practical aspects of teaching would be much more immediate and pressing, but as their teacher trainer I was concerned that their teaching be informed by the input they received in CLT. There are a number of issues in the Japanese education of English such as the use of L1 to teach the L2 and encouraging a more communicative classroom which are dealt with in a communicative approach to teaching. Therefore, I needed to find a way for the student teachers to reflect on practical concerns but also to think about the theories of CLT and apply them to their teaching.

3. Improvements to the reflection process.

The main aim of the use of smartphones was to give the participants ownership of, and easy access to the data that would enable them to reflect on their practice, however, a number of issues occurred which reduced the efficacy of this process. These were concerned with:

- **Technology:** The limited memory capacity of the smartphones to store the videos
- **Design:** The written reflection sheet

- Reflection: The focus on teacher to student interaction in the student teachers' reflections

With these in mind I therefore changed the process of reflection in the next semester I taught the course.

Technology

The student teacher used their smartphones to video their microteaching sessions but, this time, the videos were uploaded to a private YouTube channel which only the students in class could access. This allowed them to access the videos at any time but also to comment on their peers' teaching, adding to the dialogue and reflection of their teaching practice.

Design

The written reflection sheet was changed and the student teachers wrote their reflections as comments on the videos on the YouTube channel. In the previous written reflection the student teachers had focused on how they could improve their teaching, however, this time they were encouraged to comment on both positive and negative aspects of their practice. I was concerned that by focusing on improvements this might also lead to a feeling of negativity about reflective practice. It is important that they continue to reflect as their careers progress, and to encourage this they should be encouraged to reflect both positively and negatively on their teaching. It was also stressed that the reflections were not being graded as part of the assessment for the course, in order to encourage a more accurate reflection of their practice.

Reflection

In terms of the participants' reflections I thought that that the student teachers were focusing on a limited number of factors, and that

they needed to also relate some of the theoretical aspects of teaching we discussed on the course to the practical, microteaching sessions. However, this is difficult when the student teachers are simply told to reflect as they don't have the experience and, possibly, language to explain their teaching. Therefore, to provide some structure and introduce some metalanguage which they could use to reflect I decided to use a framework, the Self-Evaluation of Teacher Talk (Walsh, 2008). This framework (see Appendix) was useful because it gave some structure to the student teachers' reflections but also introduced them to some pedagogical language such as 'scaffold', 'feedback', 'clarification', 'repair' which they could use to describe their practice. This I believed would both benefit them in the short-term for this course, but also in the future as they would have a wider lexicon in order to continue reflecting on their teaching practice.

The framework has four main modes; Managerial, Materials, Skills and systems, and Classroom contexts, and each mode has a number of different pedagogical goals. As can be seen in the appendix there is also a more detailed breakdown of teacher talk and a description of a number of aspects such as teacher echo, form-focused feedback etc. This was also important because as Figure 1 shows the participants were most concerned with teacher to student interaction and the SETT framework gave them some guidance about the types of interaction that take place and related this to pedagogical ideas such as scaffolding and modelling. As can be seen from the student's comments below they were using the framework in their reflections and starting to think more deeply about their practice:

In terms of skills and systems, although I was able to establish the context well, clearly, the amount of time for the learners to output was not enough, ending up with a lot of explanation by the teacher. Also, the task itself was not so suitable for manipulating the target form since you might not always need

the hypothetical conditionals to talk about the situation of the task. All in all, there should have been much more opportunities for them to produce language.

As for managerial mode, I was successful in introducing the material we were learning on the day, because I explained to the students what they are going to be learning and on what topic we are focusing. I also concluded the activity by telling the students to work on the homework given. However, I don't think I did well on changing the mode from another, and that is another point that I could work on next time.

The SETT framework gave the participants assistance in elucidating and reflecting on their practice and as one of them commented:

Thanks to the SETT, I could give the video comments easily.

If it were not, I would have difficulty to find how to mention and reflect the lesson.

Conclusion

During the process of using smartphones to facilitate reflective practice I learned a lot from my mistakes. There are technological issues concerned with the use of smartphones but I believe that they can be dealt with and the importance of empowering student teachers to take control of the reflection process is more significant. However, they need guidance and a framework is useful in providing them with a platform to reflect on their teaching practice. We would not give a student builder a hammer and say 'go build a house' so we need to provide our student teachers with the necessary tools to reflect, and keep reflecting, on their practice.

References

- Collin, S., Karsenti, T., & Komis, V. (2013). Reflective practice in initial teacher training: Critiques and perspectives. *Reflective Practice, 14*(1), 104-117. doi:10.1080/14623943.2012.732935
- Gaudin, C., & Chaliès, S. (2015). Video viewing in teacher education and professional development: A literature review. *Educational Research Review, 16*, 41-67. doi:10.1016/j.edurev.2015.06.001
- Hobbs, V. (2007). Faking it or hating it: Can reflective practice be forced? *Reflective Practice, 8*(3), 405-417. doi:10.1080/14623940701425063
- Mann, S., & Walsh, S. (2017). *Reflective practice in English language teaching: Research-based principles and practices*. New York ; London: Routledge, Taylor et Francis Group.
- Schön, D. A. (1983). *The reflective practitioner how professionals think in action*. USA: Basic Books.
- Tripp, T. R., & Rich, P. J. (2012). The influence of video analysis on the process of teacher change. *Teaching and Teacher Education, 28*(5), 728-739. doi:10.1016/j.tate.2012.01.011
- Walsh, S. (2008). *Investigating classroom discourse*. London: Routledge.

Appendix

The Self-Evaluation of Teacher Talk (SETT) framework (Walsh, 2008)

Mode	Pedagogical Goals
Managerial	Transmit information Organize the physical learning environment Refer learners to materials Introduce or conclude an activity Change from one mode of learning to another
Materials	Provide language practice around a piece of material Elicit responses in relation to the material Check and display answers Clarify Evaluate contributions
Skills and systems	Enable learners to produce correct forms Enable learners to manipulate the target language Provide corrective feedback Provide learners with practice in sub-skills Display correct answers
Classroom contexts	Enable learners to express themselves clearly Establish a context Promote oral fluency

Feature of teacher talk	Description
Scaffolding	Reformulation [rephrasing a learner's contribution] Extension [extending a learner's contribution] Modelling [providing an example for learners]
Direct repair	Correcting an error quickly and directly
Content feedback	Giving feedback to the message rather than the words used
Extended wait time	Allowing sufficient time for students to respond or formulate a response
Referential questions	Genuine questions to which the teacher does not know the answer
Seeking clarification	Teacher asks student to clarify something the student has said Student asks teacher to clarify something the teacher has said
Extended learner turn	Learner turn of more than one utterance
Teacher Echo	Teacher repeats a previous utterance Teacher repeats a learner's contribution
Teacher interruptions	Interrupting a learner's contribution
Extended teacher turn	Teacher turn of more than one clause
Turn completion	Completing a learner's contribution for the learner
Display questions	Asking questions to which teacher knows the answer
Form focused feedback	Giving feedback on the words, used not the message

