

Effects of Scaffolded Video Analysis on Pre-Service English Teachers' Classroom Interactions and Professional Development

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Abstract

This study examines the effects of scaffolded video analysis on classroom interaction and professional development among pre-service EFL teachers. Twenty participants recorded their teaching practices for 25 minutes on two separate occasions. Following the first teaching practice, participants reflected on their respective videos during individual meetings with their professor; later, they prepared and completed a second teaching practice. The participants' first and second practices were subsequently compared to determine how the video analyses affected teachers' adoption of classroom interaction techniques. The results revealed significant increases in interaction, particularly with respect to teacher talk, questions asked, feedback, and responses.

Keywords: *scaffolded video self-analysis, pre-service EFL teachers, classroom interaction, professional development*

1. Introduction

Pre-service teachers are taught theories pertaining to learning and teaching methods, as well as how to apply them in their training. Becoming a qualified teacher generally entails completing a teaching practicum and obtaining student teaching experience—both of which being key elements in most teacher preparation programs [1]. A variety of methods have been devised to assist pre-service teachers in successfully performing these practicums, in which individuals are encouraged to reflect on their teaching approaches [1–3]. Reflection journals are commonly used in this context, in addition to feedback from professors following a given teaching practice. Due to time constraints, however, such feedback does not always prove effective in terms of producing actual change in the teaching approaches of pre-service teachers. As an alternative, some researchers have advocated the use of video in order to promote reflective practices among pre-service teachers [2–3]. Nevertheless, sparse research has been conducted concerning the use of video as a means of encouraging professional development or classroom interaction among pre-service teachers; research examining video as a self-analysis tool for foreign language teachers (particularly non-native English teachers) is likewise limited. Hence, this study examines the effects of scaffolded video analysis on classroom interaction and professional development among pre-service EFL teachers.

2. Literature Review

2.1. Video Self-Analysis and its Effect on Pre-service Teachers' Teaching Practices

Rich and Hannafin [3] examined the experiences of three pre-service teachers who utilized a web-based video analysis tool. Qualitative analysis revealed that the tool enabled participants to evaluate their teaching from different perspectives, identify discrepancies between the video recordings and their recollections of a given lesson, and adjust their teaching practices accordingly. Indeed, Reitano and Sim [2] argue that, in the

context of professional development, video-stimulated recall such as that conducted in the aforementioned study forms a direct link between teaching theory and practice; moreover, it facilitates the examination of teachers' thought and decision-making processes, as well as personal teaching theories and knowledge sources. They further maintain that, over time, video-stimulated recall can enhance professional development for both novice and experienced teachers participating in a community of practice.

According to Nelson [1], video observations of student teaching reveal different types of information than traditional, on-site observations. In addition, whereas group discussions promote outward reflection, individual conferences with teachers, followed by video self-analysis, facilitate an inward understanding of classroom issues. The pre-service teachers in Nelson's study highlighted positive aspects in their respective lessons, as well as elements that were in need of improvement. Similarly, video observations afforded participants an opportunity to address matters that were not apparent to them while teaching their lessons.

2.2. Classroom Interaction and Second Language Acquisition

Lei [4] examined various features of communicative teacher talk by analyzing genuine English classroom interactions; she determined that genuine communication is typified by the use of referential rather than display questions, thereby stimulating classroom interaction and language acquisition. Kim [5] attempted to identify scaffolding and instructional strategies conducive to student engagement and language use by both quantitatively and qualitatively analyzing teacher talk. The results highlighted the importance of leading quality interactions on a moment-to-moment basis; furthermore, she asserted that teacher education programs should include courses focusing on the implementation of classroom interactions in order to promote successful second language acquisition.

Shamsipour and Allami [6] utilized the interactional features proposed by the self-evaluation of teacher talk framework in their research concerning teacher talk and learner involvement in EFL classrooms. In doing so, they categorized classroom interaction features into positive and negative types: referential questions, scaffolding, content feedback, seeking clarification, display questions, and extended learner turns were deemed positive features, whereas teacher echo, teacher interruptions, and turn completion were considered negative. The researchers concluded that positive features should be encouraged so as to promote effective EFL instruction and that teachers ought to develop an awareness of interactional features in order to improve their instructional practices.

Kim [7] explored differences between task-based and story-based learning in terms of teaching interaction. Data analysis was conducted using a revised version of the Target Language Observation Scheme (TALOS), which is commonly used to analyze teacher talk and teacher-student classroom interactions; accordingly, it contains specific items to achieve this goal. Transcripts of classroom interactions were prepared, and occurrences of specific TALOS items were then tallied.

3. Research Questions

This study seeks to (a) determine whether any differences will be observed between the first and second teaching practices with respect to the frequency of classroom interactions following the student-teacher conferences and scaffolded video analyses, and (b) identify participants' perceptions regarding the effects of student-teacher conferences and scaffolded video analyses on their classroom interactions and professional development.

4. Methodology

4.1. Participants

Seven male and 13 female pre-service, non-native English teachers at a private university in Seoul participated in this study. They were enrolled in Theories and Practices in Teaching English as a Foreign Language, which is a compulsory course for prospective English teachers in Korean secondary teacher education programs. The students were all English education majors, although four were double majoring in other subjects.

4.2. Procedure

Participants prepared and recorded their teaching practices on two separate occasions. Students later transcribed these practices and analyzed them using the revised TALOS. Following this, student-teacher conferences were conducted wherein participants received feedback and assistance in further analyzing their transcripts. A course timeline and overview of the activities and data collected is provided in Table 1.

Table 1. Course Timeline, Activities, and Data Collected

Activity	Data collected	Week(s)
First teaching practice lesson plans completed	Lesson plans	2
First teaching practices recorded	Videos / transcripts	3–6
First teaching practices analyzed	Self-analyses	4–7
First round of student-teacher conferences	Feedback forms	4–8
Second teaching practice lesson plans completed	Lesson plans	8
Second teaching practices recorded	Videos / transcripts	9–12
Second teaching practices analyzed	Self-analyses	10–13
Second round of student-teacher conferences	Feedback forms	10–14
Comparison of first and second teaching practice transcripts	Self-analyses	14
Final reflections written	Reflection papers	14
Final interviews conducted	Interview transcripts / videos	15

Recordings of the teaching practices were uploaded immediately after lessons were completed, and could be downloaded whenever necessary. Figure 1 shows a screenshot from a course management system component that allowed participants to store and retrieve their respective videos. The course management system was also used to submit assignments such as lesson plans and transcripts, as shown in Figure 2. After transcribing their lessons, participants coded their teacher talk according to the revised TALOS. Figure 3 shows an excerpt from one student's transcript, wherein she used contrasting colors to distinguish between different types of teacher talk.

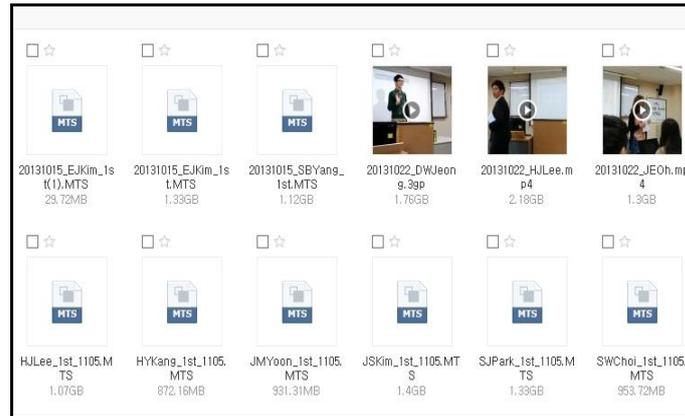


Figure 1. Storage and Retrieval of Participant Videos



Figure 2. Submission of Transcripts and Lesson Plans

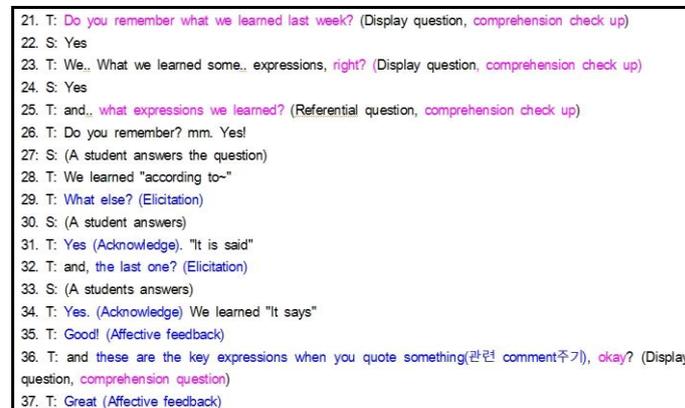


Figure 3. Excerpt from a Participant's Color-Coded Transcript

4.3. Data Analysis

In investigating classroom interaction, transcripts from students' teaching practices were critically examined with respect to the frequency of teacher talk, questions (general, display, and referential), comprehension checks, directions, responses, and feedback. To compare the frequencies of specific items between the first and the second teaching practices, a *t*-test was performed using SPSS 19.0; to assess professional development, interview data and reflection papers were analyzed by means of the constant comparison method [8].

5. Results and Discussion

5.1. The Effects of Video Analysis on Classroom Interaction

Descriptive statistics comparing the first and second teaching practices are provided in Table 2. The mean values for teacher talk were 145 and 185.2 for the first and second practices, respectively. As for general questions, the average number asked during the first and second practices was 42.95 and 59.35, respectively; in terms of referential questions specifically, an average of 10.47 and 13.16 were asked during the first and second practices, respectively.

Table 2. Descriptive Statistics

Item	Practice	<i>M</i>	<i>SD</i>
Teacher talk	1	145.00	74.72
	2	185.20	82.27
General questions	1	42.95	25.02
	2	59.35	30.04
Display questions	1	21.10	10.57
	2	25.90	14.00
Referential questions	1	10.47	9.23
	2	13.11	8.10
Comprehension checks	1	13.17	8.99
	2	19.33	18.35
Directions	1	38.79	23.85
	2	47.53	28.79
Responses	1	27.81	17.93
	2	34.94	23.68
Feedback	1	19.71	13.16
	2	37.82	25.65

The increased frequency of referential questions indicates that teachers partook in a significant amount of classroom interaction, and were therefore able to enhance English acquisition among their students [4]. Although referential questions were not exceeded in frequency by display questions, the findings nonetheless demonstrate that teachers' classroom interactions began to embody more genuine forms of communication following the student-teacher conferences and video self-analyses.

Table 3 shows the correlation results for the frequencies of different classroom interactions between the first and second teaching practices. High correlations were identified for teacher talk, questions (general, display, and referential), directions, responses, and feedback.

Table 3. Correlation Results for Classroom Interactions Between the First and Second Practices

Item	Correlation	Significance
Teacher talk	.862	.000
General questions	.729	.000
Display questions	.902	.000
Referential questions	.609	.006
Comprehension checks	.222	.375
Directions	.856	.000
Responses	.851	.000
Feedback	.778	.000

The *t*-test results revealed statistically significant differences between the first and second practices with respect to teacher talk, general questions, directions, responses, and feedback (see Table 4); no significant differences were identified, however, for referential questions and comprehension checks—two elements that are key to ensuring enhanced language acquisition [5]. Overall, the findings suggest that classroom interaction changed in more dynamic ways between the first and second practices.

Table 4. Frequencies of Different Interaction Techniques Between the First and Second Practices

Item	<i>M</i>	<i>SD</i>	<i>t</i>
Teacher Talk	-40.20	41.94	-4.287*
General questions	-16.40	20.79	-3.529*
Display questions	-4.80	6.39	-3.361*
Referential questions	-2.63	7.73	-1.483
Comprehension checks	-6.17	18.55	-1.410
Displayions	-8.74	14.92	-2.553*
Responses	-7.13	12.62	-2.258*
Feedback	-18.12	17.48	-4.273*

Note. * $p < .01$

5.2. Participants' Perceptions Following the Student-teacher Conferences and Scaffolded Video Analyses

To ascertain participants' perceptions of the student-teacher conferences and scaffolded video analyses, their reflection journals and final interview transcripts were analyzed using the constant comparison method, thereby revealing three important themes. First, teachers were able to identify discrepancies between their intended and actual classroom interaction techniques. Second, while reviewing their videos during the transcription process, participants frequently discovered deficiencies in their English teacher talk, which they subsequently attempted to improve upon. Third, teachers preferred scaffolded video analysis and student-teacher conferences to traditional, post-teaching group discussions; this can be attributed to the fact that self-analysis and conferences facilitate the identification of teaching flaws in a private context, wherein participants' shortcomings are not exposed to colleagues. In addition, the student-teacher conferences enabled teachers to receive direct feedback concerning their pronunciation, accent, and

teaching. Thus, the conferences and video analyses seemingly aided teachers in improving their reflective practices and classroom interaction skills.

6. Conclusion

This study investigated the effects of student-teacher conferences and scaffolded video analysis on classroom interaction techniques and professional development among Korean pre-service English teachers. Significant differences were identified with respect to the frequency of classroom interactions between the first and second teaching practices; moreover, the final reflection papers and interview transcripts revealed enhanced reflective practices, which are crucial to professional development. However, because the study's participants comprised solely Korean pre-service EFL teachers enrolled in a single course at the same university, its results cannot be generalized. Furthermore, as the teaching practices were microlessons, they cannot be deemed wholly authentic. Hence, future research should include a more diverse sample and be conducted in a more authentic context.

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