

Improving Collaborative Dialogues with POV Video

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Until recently, educators have relied on either stationary or handheld camcorders to collect classroom data. With the development of point-of-view (POV) camcorders, however, naturalistic classroom events can be captured from a truly participant perspective. Over the past 2 years, I have conducted trials with POV camcorders to examine interaction in oral communication classes. One promising result of these trials is the use of POV video clips to create materials focused on increasing students' classroom interactional competence (CIC) in collaborative dialogues (CDs). This exploratory paper provides a short description of POV trials and a selection of materials based on these recordings. It concludes with a discussion of further applications and potential research directions.

最近まで、教育者たちは教室内の情報を集める手段として、固定式または携帯式のビデオレコーダーに依存してきた。しかし、point-of-view (POV) ビデオレコーダーが開発され、教室内で自然に起きている出来事を、学習者の視点から忠実に記録することが可能となった。過去2年間にわたり、筆者はPOVビデオレコーダーを使って、オーラルコミュニケーションの授業における学生のインタラクションについて調査してきた。その結果、POVビデオレコーダーで作成したビデオクリップを資料として使用することが、学生が教室内で共同の対話を通してインタラクション能力を向上させることを明らかにするのに有効であるということが分かった。当論文は、POVのテストおよびその記録をもとに作成した資料について説明する。結論として、POVの将来的な応用および研究の方向性について述べる。

THE FIRST time I recall comparing video from three distinct perspectives—stationary, handheld, and point-of-view (POV)—was in a BMX promotional video sponsored by GoPro® (2010), a company producing a popular line of wearable camcorders and accessories (name and trademark used with permission). That the audience can experience the action vicariously through the eyes of the person wearing the camcorder was a unique characteristic of the POV position. With this characteristic in mind, I began considering possible classroom applications and potential advantages this device might provide over traditional camcorders. Assuming that other teachers and researchers had already done the same, I was surprised to find that, at that time, there were very few published references to the use of POV camcorders in education, the social sciences, or applied linguistics. Even Hindmarsh, Heath, and Luff's (2010) relatively recent update of video in research did not consider POV camcorders, the only position that has the potential to provide a truly participatory point-of-view (Figure 1, all images and data used with permission).





Figure 1. Capturing a Participant POV

Though not yet an established instrument for classroom data collection—a situation that is likely to change as recorders become lighter and cheaper—POV camcorders seemed to have a clear advantage for capturing the view of a participant, neither encumbered like a handheld nor constrained like a stationary camcorder. I assumed that the POV camcorder would provide a much closer approximation of what participants actually see, hear, and say during the classroom experience. With an interest in student engagement dynamics (Kindt, 2010), I considered potential pedagogical applications and research avenues worth exploring with this innovative tool, particularly in developing ways to assist students in benefitting from practice conversations in oral communication (OC) classes. It seemed reasonable that when POV camcorders are used to capture exemplary

interactions or pinpoint areas requiring improvement, resulting clips and materials could help develop students' *classroom interactional competence* (CIC), "the interactional competence that will result in more engaged, dynamic classrooms where learners are actively involved in the learning process" (Walsh, 2011, p. 1). Furthermore, since students in OC classes participate regularly in practice conversations, I thought that increasing students' CIC would be particularly beneficial in *collaborative dialogues* (CDs; Swain & Lapkin, 1995), defined by Swain, Kinnear, and Steinman (2011) as "engag[ing] with others as a joint endeavor in meaning making" (p. 34).

After briefly describing POV trials, I provide a selection of classroom materials based on these recordings. These were designed and implemented to explore a tentative research question: Can POV camcorders and subsequent data be employed to increase students' CIC in CDs? Though an empirical examination of this question is beyond the scope of this paper, a discussion of the advantages and disadvantages of using POV camcorders to explore CIC in CDs are presented, followed by a discussion of potential for both classroom applications and future research directions. I argue that data from POV camcorders can provide a previously unavailable and valuable pedagogical resource and can promote further studies using these innovative camcorders, particularly in the area of classroom interaction.

Introducing the POV Camcorder to Students

After considering a number of POV camcorders (see Kindt 2012b for detailed descriptions and technical specifications), I ordered the first generation of the popular GoPro Hero® late in the summer of 2010, providing me enough time to become familiar with the equipment before introducing it to students in four OC courses at the beginning of the second semester in mid-September. (It is worth noting here that the most recent version of the GoPro camcorder is the Hero 3®, available since December 2012.)

To introduce students to the POV camcorder, I used the same BMX promotional video clips that I saw on the GoPro website. Preparing for conversations about summer activities, I suggested BMX riding as one such activity and showed the students video clips of the same rider from two perspectives, stationary and POV. After discussing some of the differences the perspectives provide and brainstorming some interesting activities to do with a POV camcorder, students suggested *climbing a mountain, cooking something, riding a roller coaster*, and the like. Then we considered the camcorder's potential for English study, and our OC classes in particular. After some time to contemplate the idea and offer some suggestions, including *record our conversations, teach how to do something, and practice giving presentations*, I showed students the camcorder and explained that I thought it would be fascinating to see the class through their eyes, something that teachers rarely—if ever—see. After gauging student interest, which seemed relatively high, I asked for general permission to trial the camcorder and possibly use subsequent data, including images, video clips, and transcriptions, in future classes and for research purposes. I also gave students the chance to contact me after the class or via email should they be uncomfortable with wearing the camcorder, being a wearer's partner, or viewing short clips from the recordings. In all four classes, agreement to make POV recordings and the first volunteer came quickly and no students noted they were uncomfortable with the trials. Some students did, however, request that their video clips not be shown in subsequent classes.

Developing Materials to Improve Collaborative Dialogues

With the aim of increasing student CIC in self-directing learning opportunities in CDs, I first employed POV camcorders to better understand the nature of student interaction in CDs in my 1st- and 2nd-year OC classes. After viewing the resulting video, I

considered interventions for improving students' IC, particularly for those students who have not yet developed effective interactive skills. To trial interventions, I used the head-held camcorders to capture footage to potentially develop students' grammatical, strategic, and nonverbal competence to help them engage more effectively in CDs. In these competency areas, it is apparent that one advantage that POV camcorders have over standard devices is the wearer's head controls what is captured. This results in a dynamic, participant recording of audio and visual data that can include the teacher, other students, materials, and so on. It would require a number of stationary and handheld camcorders with operators to attempt to capture this dynamic variety.

Besides being head-controlled by a participant, POV camcorders have less apparent advantages. They are a novelty and have an inherent playfulness that differs from stationary camcorders' often research-like impression. This may be due to students' awareness of their use in outdoor sports and by comedians in Japan. Compared with head-held cameras, both handheld and stationary devices effect a distance, both physical and participatory. Thus, POV recordings result in transcriptions that can be exploited for effective examination of grammatical competence because it is likely to be closer to what students actually do and say during classroom events. Similarly, an investigation of strategic and nonverbal competence can be more encompassing because interactions with teachers and other students are also captured, which is not the case with a stationary camcorder unless they move close to the scene. Handheld camcorders may capture such interactions, but they tend to provide roving perspectives, and without such roving a student or pair might become overly self-conscious, particularly with an assistant or another student recording them over extended periods.

In the following sections, I briefly introduce the types of materials used to increase grammatical, strategic, and nonverbal competence in CDs.

Developing Grammatical Competence

The first instance of bringing student interaction captured by the POV camcorder to a class as a video clip with accompanying materials was a section from approximately the last minute of my introduction to a task (Figure 2) through the first 2 minutes of student conversation completing that task. This resulted in a transcription comprising several lines of my explanation, continuing with student-student dialogue to the end of an A4 page (see Appendix A). It provided a number of potential learning points for helping students to possibly increase formal accuracy and interact more effectively during classroom conversations related to the topic, in this case concerning diet and health.



Figure 2. Video Capture of the Teacher's Instruction From a POV Camcorder

To illustrate, the first learning points in this handout were related to teacher talk. By including an excerpt of my instruction, students were able to get more exposure to some common classroom expressions. In this case, the expressions included,

anyway, ideas that you can maybe talk about today, I'll give you about 10 minutes, and talk a little bit more freely. Interestingly, the wearer shadowed "more freely." In the section of student dialogue, a number of grammatical points were presented including "soybeans **are**," "good **to lose our for losing** weight," "is not **good for me my taste**," and "a lot of **new** kinds of soybean milk **was released are being sold**." Besides potentially useful classroom expressions and grammatical points, I also drew students' attention to interactional skills related to the appropriate use of electronic dictionaries, nonverbal communication, translation, and effective follow-up questions.

Developing Strategic Competence

Besides helping students to focus on particular linguistic items, in creating the first set of materials it became clear that the POV clips could also be exploited, as I had hoped, for instruction of conversation strategies, an important element for competent participation in EFL classrooms (Schwab, 2011). Thus, in designing the next set of materials, I used a 2-minute clip from a student conversation in which I was able to pinpoint 10 strategies (Appendix B). In this case, the strategies had all been introduced in previous class meetings. When using the materials in class, we first watched the video and afterward I attempted to elicit some of the strategies being used. Students then watched a second time, trying to fill in the handout on their own. They watched a third time before collaborating with a partner, sharing their choices and discussing any differences. In this class, three strategies in particular seemed to interest the students: (a) interjections, (b) intonation questions, and (c) self-correction. Noting this, I wrote these strategies on the board and students assisted in brainstorming example gambits. Then students were encouraged to try to use at least one gambit from each of the three strategies in a subsequent practice conversation. After the conversations, I asked students to raise their hands if they used

the strategies. The majority of students did so, indicating that it is likely that they were making efforts to integrate these interactive techniques into their conversations.

Developing Nonverbal Competence

Because POV recordings obviously include visual data, I was able to examine not only what is being said, but also what participants are actually doing nonverbally during conversations. Thus, in developing the third set of materials, I decided to introduce this novel use of POV clips by focusing on gesture and facial expression. I extracted a 3-minute excerpt of my explanation of a vocabulary item in the OC textbook, creating a handout similar to that for presenting communication strategies (Appendix B), but with suggested items and blanks for selected gestures rather than strategies. I again gave students a number of opportunities to view the clip; they seemed actively engaged in trying to match the gestures and expressions listed at the top of the handout with their occurrence in the transcription. This engagement seemed especially keen when students collaborated with a partner (Figure 3). Based on the students' general reaction, it appears that their interest is enhanced by video recordings from their own classes, which, being of their own actual production, are likely to be set more closely to their Zone of Proximal Development (ZDP; Vygotsky, 1978/1930s), making them easier to access and engage in. The handout provided a number of interactive expressions and matching gestures that became practice points in subsequent conversations, providing students with the potential to gain a greater awareness of the nonverbal aspect of interactions in English conversations.



Figure 3. Video Capture of POV-Derived Handout as Seen Through a POV

Thoughts on Advantages and Disadvantages

Although the POV-derived materials listed above are a small sample, after 2 years trialing the POV camcorders in a variety of ways to help increase students' CIC in CDs, it is possible to describe some general advantages and disadvantages. One powerful advantage, as I mentioned earlier, is the camcorder's ability to capture a participant's view of events, whether teacher or student interactions (compare Figure 4 and Figure 5 below, taken at precisely the same time). Without POV camcorders, I would not be able to see and hear a much closer approximation of what students see and hear. I realize that students can hold their heads still and look elsewhere, or speak in a whisper, but the resulting video provides an extraordinary record of one participant's experience in classroom events, a record that is qualitatively different from stationary and handheld video.



Figure 4. Photo From the Teacher's View



Figure 5. Video Capture of Student's View

One disadvantage is that the recording captured by the POV camcorder is still only a single view, and in my OC courses only one of between 12 and 17 participant perspectives. By seeing and hearing what a student and his or her partner are doing during tasks, however, a teacher may be able to make better-informed pedagogical decisions. This assumption can be problematic based solely on single incidents, but when individual samples—enhanced by viewing a number of students over several class meetings—are taken into account, the result can be productive.

In these trials, the process of reviewing POV videos over time has initiated a clearer understanding of the nature of interaction for both individual students and the classes in general. Though I am not yet able to offer empirical evidence for improvement, in the areas of grammatical, strategic, and nonverbal competence, the head-held camcorders could capture a record of what students were saying and doing, and provide an innovative approach to potentially targeting and promoting improvement in these areas in subsequent lessons. As multiple recordings are processed and analyzed, I plan to use POV recordings to develop a database of learner interaction to map students' CIC at various skill levels and support progress at each of these levels.

Logistical Issues

When using POV equipment, there are a number of logistical issues that require extra attention from the teacher or an assistant. It is particularly important for students to be aware how the camcorder will be used, what it will be used for, and how wearers will be selected. The majority of courses under study had immediate volunteers in each class meeting, but three times I had to encourage someone, usually the next person on the class list, to wear the camcorder. Again, permission to use the camcorder and that wearing the camera would be voluntary had been established the first day. All wearers to this point have

volunteered. In one case, however, the wearer felt the camera was uncomfortable, apparently due to hair accessories. The student removed the camera and his partner agreed to wear it. Also, in one group the same student volunteered twice.

I understand that although there was generally great enthusiasm and excitement generated by introducing the POV camcorders to the four courses under study (Figure 6), some students may not want to participate. Should that situation arise, I plan to ask another student to volunteer, request someone volunteer for a second time, wear the camera myself, or refrain from videoing that class session.



Figure 6. Effects of the Camcorder

Finally, there are a number of steps required to successfully record and organize video files. The camcorder must be set properly—with charged batteries and an empty memory card—and turned on. Turning on the equipment is simple, but

in one instance several minutes had passed before I noticed the camcorder was not recording. The video files, which require approximately 4GBs of memory space per hour of capture, need to be copied to a hard disk and organized by course and class meeting. None of these tasks are odious, but they do take time and the development of an efficient organizational system. Transcription for materials development is time consuming, but this has been made easier by improved audio quality due to the GoPro's recent addition of an external 3.5mm microphone plug.

Further Directions for POV Video

There are many possible directions for classroom studies, including investigations of student interaction, using POV camcorders. With the wealth of interactive information already captured, I am considering the use of NVivo 10 (Richards, 2013), a type of Computer-Assisted Qualitative Data Analysis Software (CAQDAS), to aid in the organization and analysis of this relatively large amount of data, which include not only the video files and transcriptions, but accompanying materials, photographs, journals, and student feedback. This data will come together in a multimedia database of classroom interaction, tentatively called the *Database of English Learner Interaction (DELI)*, which is expected to contribute to an increased understanding of the nature and development of students' CIC, particularly during CDs. Interested readers can follow the progress of the DELI project online (Kindt, 2012a).

Some other possible areas for further study of learner interaction using POV camcorders include: (a) exploring ways to address the challenging task of aligning teacher and student expectations; (b) involving students more in analyzing clips, perhaps meeting with volunteers outside of class time; (c) designing in-depth questionnaires and conducting interviews to clarify student experience; (e) exploring the effect of the camcorder as,

for example, another teacher presence; and (f) documenting the effectiveness of various communicative tasks.

Final Thoughts

Although there are a number of issues related to its implementation—including cost, logistic concerns, student comfort, place in the larger curriculum, and integration with other technologies (Figure 7)—there is great potential for new insights into classroom interaction from this innovative camcorder, particularly with the participant perspective it provides. As with all innovations, there will be a period of experimentation and development leading to more efficient and effective methods. After 2 years of trials, however, my impression is that the POV head-held camcorders can open up new possibilities in collaborative learning, materials development, student motivation, teacher education, and other areas of classroom research. I expect it—and future, more-lightweight versions with improved audio capture—to become a staple among educators' observational and developmental tools.



Figure 7. POV and Other Technologies

Bio Data

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Appendix A

Sophomore Oral Communication Class: Excerpt From a Lesson About Health

Write the corrections or improvements on the lines next to where they are used:

1. PK: ...very small portions of meat and convenience foods. Really? How often do you guys eat convenience store food, I wonder. But it says here, "...very rare that people eat a lot of meat or convenience store food." Maybe that's changing. Anyway, some ideas that you can maybe talk about today with this new partner that you are sitting with. I'll give you about 10 minutes. Let's try again to talk a little bit more freely about diet. Go ahead you guys.
2. A: More freely... Do, do, do you think, what food is healthy?
3. B: Ah. Mm. I think, soybean is soybeans are very healthy, because, um... <checks dictionary> ...it have not, uh, uh, sorry, "carbohydrate," so it's, it is good for our health. Have not, uh, high, uh... It's low calorie.
4. A: Mm-hm.
5. B: It's good to lose our, our weight. good for losing weight
6. A: Ah.
7. B: So, I like it.
8. A: <nods>
9. B: How about you? What do you think about healthy food?
10. A: I think, mm, mm, so, something, uh, used soybeans, made of soybeans so for example tofu, or natto, or tonyu. soymilk
11. B: Mm. I see.
12. A: It's, I think it's healthy food.
13. B: Do you like it?
14. A: Yeah. Uh, uh, do you... Uh, can you, can you drink tonyu?
15. B: Yeah, but, uh, natural, natural tonyu...
16. A: Ah!
17. B: ...is not good for me. is not my taste But, oh. Is it sweet? Ah, sweet. Ah, it's a lot of variation of taste...
18. A: <nods>
19. B: For example, strawberry...
20. A: Ah!
21. B: ...and tea, green tea. I like them.
22. A: Ah, yeah, yeah. Recently, a lot of new kinds of to, tonyu, soybean milk is, was released. are being sold So, I think... I... People who don't like to, soybean milk, makes it easier, easier to drink...

Appendix B

Freshman Oral Communication Class: Excerpt From a Lesson About Food

Write the strategy on the line next to where they are used:

- | | |
|--------------------|------------------------|
| 1. confirmation | 6. intonation question |
| 2. giving examples | 7. self correction |
| 3. having fun | 8. shadowing |
| 4. interjection | 9. suggesting a word |
| 5. interrupting | 10. using synonyms |
-
1. A: Uh, this year...
 2. B: Yeah.
 3. A: ...*nashi*...
 4. B: *Un*.
 5. A: ...is very expensive.
 6. B: Expensive, _____ *shadowing* _____ uh-uh. I think so, t... Yeah.
 7. A: So it, I ate little. [?]
 8. B: Mm-mm. You don't like *kaki*? _____ *intonation question*
 9. A: Yes. [How do you answer a negative question in English?]
 10. B: Japanese fruits.
 11. A: Yes. You like...
 12. B: *Kaki*. _____ *suggesting a word* _____ <laugh>
 13. A: <laugh> _____ *having fun*
 14. B: Yeah, I like x.
 15. A: Yeah, so you often eat *kaki*?
 16. B: Yeah, yesterday, yesterday, I ate *kaki*...at supa, supper. _

self correction

17. A: Do you like only fresh *kaki*?
18. B: Mm, yeah, only fresh, raw, raw... _____ *using synonyms*
19. A: Mm.
20. B: *Kaki*, yes. <laugh>
21. A: <laugh> Ah. Mm, in this spring vacation...
22. B: *Un*, spring vacation.
23. A: I know you _____ *will* _____ go to New Zealand...
24. B: Uh, New Zealand, yeah. _____ *confirmation*
25. A: What do you think _____ *about* _____, uh, food, food...
26. B: Food.
27. A: ...in New Zealand? Uh, very...
28. B: I worry about food. _____ *interrupting*
29. A: Ah.
30. B: So... I can't eat mayonnaise...
31. A: Ah!
32. B: ...but, I think people...
33. A: Oh.
34. B: ...in New Zealand seems _____ *seem to* _____ like mayonnaise.
35. A: Really? _____ *interjection*
36. B: Mayonnaise, sandwich, or...
37. A: Ah.
38. B: ...hamburger, like, potates potatoes and... _____ *giving examples*