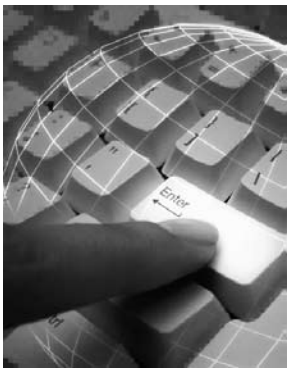

Unanticipated Findings: Gains by Cooperating Teachers via Video-Mediated Conferencing

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Abstract

This article describes the transformations that took place as two veteran teachers grappled with the insertion of video-mediated videoconferencing (VMC) for practicums during an initial study that focused on teacher candidates. Through their stories, the following themes were identified: teacher as risk-taker, VMC as a motivating device to promote student participation in learning, reassessment of teaching practices, and teacher change. Findings indicate that (a) cooperating teachers need to strive for realism and not for perfection during demonstrations, (b) school-university partnerships can be fostered through 21st-century technologies, and (c) informed and supportive stakeholders within the school community can impact participation and learning from newly implemented VMC supervision techniques. Lessons learned can be helpful for teacher educators, K–12 administrators and teachers, and technology support personnel who desire to assist teachers in embedding supportive technologies for teacher education. (Key Words: video-mediated conferencing, cooperating teachers, collaboration, teacher change, teacher reflection, practicum, field experience)

Introduction

Qualitative researchers often find that when they are investigating one phenomenon, other tangential concerns arise and take prominent roles. This article reports the unanticipated findings regarding teacher participants when teacher candidates were being investigated. Teacher participants within this study were initially merely conduits for information leading to research regarding the teacher candidates with whom they partnered. However, after witnessing their strong, positive reactions to the communication modality utilized in the research process, these teachers' voices became recognized as invaluable perspectives and the focus of this subsequent study.

The experiences of the teachers in this study lead us to ask: (a) What happens when cooperating teachers who are well versed in traditional formats for field experiences are introduced to video-mediated conferencing (VMC), a live two-way video broadcast that is moderated by a facilitator? (b) What do cooperating teachers reveal when they elaborate on video-mediated conferencing? Such questions may seem inconsequential if one follows the common assumption that teachers implement new practices without question or with small modifications to fit their given context for instructional reform efforts (Sato, Coffey, & Moorthy, 2005). However, when this study investigated teacher reactions to VMC experiences, it observed that cooperating teachers would willingly forego the practice of solely supporting teacher candidates within the confines of their classroom with the typical two to three visits by university personnel for adding a distance learning model. Such behaviors could respond to the call for greater collaboration between universities and school partners (Guyton & McIntyre, 1990; McIntyre, Byrd, & Fox, 1996).

When educational reform efforts are attempted without the agreement and full collaboration of the classroom teacher, teachers can view such attempts as coercive. Subsequently, to disseminate a technological practice that will modify traditional modes of operation, educators must be willing to construct pedagogically sound reasons for doing so (Hughes & Zachariah, 2001; Kirkman, 2000). This is crucial because teachers, who solely mimic the expectations of technological reforms espoused by leaders, have little knowledge of how the technology can expand the role of teaching and learning (Creighton, 2003). This article, therefore, endeavors to share the perspectives of two cooperating teachers as they implemented video-mediating conferencing within their classroom settings.

Literature Review

The Range of Field Experiences: From Face-to-Face to Cyber

Authentic field experiences prior to student teaching come in a variety of contexts along a continuum. On one end, some traditional face-to-face practicums may involve international, national, and local experiences that consist of observations and communications with PK–12th grade learners and educators during or after university coursework for a designated period of time for teacher candidates (Huling, 1998). Such experiences include but are not limited to tutoring, observing, managing clerical work, preparing instructional material, teaching, and evaluating students.

Telecommunication practicums allow teacher candidates to see, discuss, and even teach students in PK–12th grade classes from a distance. The predecessors for telecommunications commenced in the 1960s (Abel, 1960; Hoy & Merkley, 1989) with closed-circuit video technologies to link universities and PK–12th grade classrooms. However, such technologies were expensive and difficult to construct and maintain. But, with the creation of technology such as the Polycom (http://www.polycom.com) that utilized the Internet as the medium for conducting two-way live broadcasts, educators could expose teacher candidates to diverse teaching situations in a more flexible and cost-effective manner. Video-mediated conferencing adds the additional factor of a moderator, such as a university supervisor or school faculty member, who is responsible for interpreting events evidenced within the live two-way broadcasts. It also allows for the cooperating teacher to conference with the teacher candidates and provide clarifying feedback regarding observed practices. Hence, the insertion of mediated in the term video conferencing denotes a facilitator's role within the telecommunication activity.

However, VMC is not without its detractors and concerns. Several studies (e.g., Gage, Nickson, & Beardon, 2002; Fetterman, 1996; Hiel & Herrington, 1997) depicted the benefits and shortcomings of the video-mediated conferencing process for teacher candidates such as the ability of multiple teacher candidates to monitor a class without interfering in the actions of the students, but also the issue of being able to see the classroom only within the range of the given camera. Although such issues may certainly mitigate the effectiveness of VMC in some ways, this study focuses on the reaction this technology produced in the cooperating

teachers who experienced being in front of the camera and being viewed at a distance by many teacher candidates.

Giving Voice to Cooperating Teacher's Perspectives

The expertise of cooperating teachers in supporting teacher candidates in any given field-experience scenario cannot be minimized. Several researchers (Norris, Larke, & Briers, 1990: Roberts & Dyer, 2004) have noted that cooperating teachers are one of the most influential factors in the field-experience process. The concept of valuing the talents and strengths of school partners to promote learning in a collaborative format with university partners is an already existing principle in many national and state educational standards. For example, the 2007 revised edition of standard three for the National Council of Accreditation of Teacher Education (NCATE), titled Field Experiences and Clinical Practices, mandates collaboration between the school and university program for a successful field experience program. In fact, standard 3a states that for a university to receive the highest rating, they must do the following:

> … each [must] participate in the unit's and the school partners' professional development activities and instructional programs for candidates and for children. The unit and its school partners share expertise and integrate resources to support candidate learning. They jointly determine the specific placements of student teachers and interns for other professional roles to maximize the learning experience for candidates and P–12 students. (NCATE)

With this thought in mind, the number of possible collaborative and inquiry-situated scenarios is somewhat staggering for all educational professionals involved in preparing teacher candidates. However, no issue is more significant to the success of field experiences than the active role the cooperating teacher plays. Subsequently, from this perspective, the following research questions are deemed viable:

1. What do cooperating teachers who are well versed in traditional formats for field experiences learn when they are introduced to VMC to instruct teacher candidates?
2. What are cooperating teachers' thoughts on utilizing alternative field observation structures such as video-mediated conferencing?

Thus, the study described in this article depicts the journey of two veteran teachers as they grapple with the inclusion of VMC and expand their understanding of this nontraditional format for field experiences.

Considerations to Help Cooperating Teachers Participate Effectively in Reforms

Because the role that cooperating teachers play is crucial, the type of support teacher candidates receive from classroom cooperating teachers cannot occur in college classrooms that segregate themselves from the schools in which the interactions are occurring (National Commission on Teaching and America's Future, 1996). Therefore, supervising partners at the university site and the cooperating teacher partners at the PK–12 site must jointly fulfill the supervisory role in field experiences by assisting the teacher candidates in developing their professional knowledge and skills. However, uncertainties exist when cooperating teachers try to cope with a new technological tool within a context that only few of them have heard of or applied (Kirdis, Drossos, & Tsakiridou, 2006). Therefore, ongoing support from university and PK–12th grade partners is definitely an important aspect in developing and building teachers' capacity to integrate new technologies.

Methodology

Participating Teachers

The participating cooperating teachers were nominated by their principal based on the following criteria: They (a) were deemed highly qualified teachers by No Child Left Behind (NCLB), (b) were trained and approved in cooperative teaching techniques by the researcher's university, (c) had success with teacher candidates in traditional face-to-face field experiences, (d) exhibited expertise in the content area of social studies, and (e) had sufficient time allotted within their school schedule to demonstrate social studies methods because the accompanying course and field experience focused on this discipline. Each teacher was also expected to teach via VMC at least one time prior to face-to-face visitations.

Ms. Newell-Byrd, a black female who teaches language arts and social studies for her 5th grade team, is a 40-year veteran teacher. Mrs. Harrell, a white female 6th grade teacher who specializes in social studies, is a 30-year veteran teacher. Both graduated prior to the mandate for technological competence. Thus, each participating teacher exhibits minimum technology integration in their designated classroom without substantial support from colleagues. Furthermore, each participating teacher has no experience with VMC. Lastly, the participants' names were protected in the beginning. However, upon receipt of the findings for clarification, both teachers removed the stipulation for anonymity.

Participating Teacher Candidates

In the spring of 2008, 17 teacher candidates participated in the VMC experience; 12% were black females and the other 88% were white females. Each was a United States citizen whose native language was English, and they ranged between the ages of 20 and 50 years old. The 17 elementary teacher candidates were simultaneously enrolled in both the three-credit elementary social studies course and the one-credit accompanying practicum utilized for the study. The university supervisor was the facilitator for both the course and the accompanying field experience as well as the researcher for the study.

The Public School Setting

The student practicum placement office at the university selected the PK–8th grade school for the researcher. The school was situated in a rural setting on the outskirts of the county in which the university was located. Although this school was used for student teaching, it was not often used for an entire class of practicum students for several reasons. First, students needed to add an hour for travel time in addition to their 2-hour expected visit. Second, due to a school initiative called Reading First, teacher candidates could view PK–8 students in a limited window of time, and any accidents or road construction on the one-lane entry to the school could lessen the field experience time. However, the benefits included highly qualified teachers in a school that was not oversaturated with teacher candidates. In addition, the administrator was willing to try a telecommunication method, VMC, to foster positive collaboration, alleviate some of the issues noted, and further the research of supervision at a distance.

Social Studies Practicum

The principal and university supervisor at the school site required teacher candidates to participate in one orientation session. Next, they participated in two video-mediated conferences with the participating teachers from the assigned school. After the VMC experiences, teacher candidates participated at the assigned school in their individual classrooms in sets of two or three for two face-to-face observations. Lastly, the candidates interacted with the PK–8 students six times to teach a social studies unit prepared in their adjoining social studies method course. These events occurred over a 15-week semester for a total of 15 hours in 2-hour segments.

Research Design and Procedures

To create a culture of collaboration that necessitates the kind of professional discourse that can transform an organization into a professional learning community (DuFour, 2005) through VMC, the university instructor/researcher restructured the introductory portion of the social studies practicum. Teacher candidates were then able to observe that both the university and school partner were mutually involved and interested in their development.

VMC consisted of three phases. In the first phase as well as the third, VMC was opened to bidirectional communication between the cooperating teacher, the university teacher-researcher, and the teacher candidates. In the interim phase, the cooperating teacher taught a lesson in her school setting while participants at the university observed and discussed what was transpiring without affecting the teacher's instruction. During all of these phases, a technology technician was available to modify the sound, picture, and connection as necessary when given instructions by either the cooperating teacher or university teacher-researcher.

Sources of Data

This qualitative research involved semi-structured interviews intended to capture recurring themes and unanticipated topics about the usage of VMC. Interviews occurred in group format as well as individual sessions and included a time for open discussion. Two individual interviews and one group interview occurred prior to the inception of the VMC study. One individual meeting also occurred directly after each participant's VMC presentation, and one individual and one group meeting occurred at the end of the study. Though the original study was aimed at the prospective teachers and the possible benefits gained through VMC, participating teachers reported in the meeting directly after their VMC session about what the event meant to them. Therefore, the researcher asked them to compose one personal narrative about their experience with VMC during one of the final group meetings. Such a request as noted by Atkinson and Hammerly (1994) reinforces the ethnographic notion that researchers should gather data they have not structured to note the lived experiences and thoughts of the participants. Lastly, participants were contacted after data interpretation to conduct a member check (Maxwell, 1996; Miles & Haberman, 1994) on emerging themes noted by the researcher.

Data Analysis

To analyze the data, Neuendorf's process for analyzing content (2002), which is grounded in qualitative methods of analysis, was utilized in this ethnographic study. This process entails first understanding the theoretical perspective that guides the study. In this case, constructivism guided the documentation of the research because, as cooperating teachers facilitated VMC to support teacher candidates, they too made sense of VMC and documented their authentic experiences through narratives and recorded interviews. The second step in the process states that conceptual decisions need to be made on the investigated variable. In other words, what variable or concepts are important? In this case, the researcher focused on the concept of the VMC and its impact or lack of impact on participating teachers, and began to code text from narratives and interviews according to the selected variable. The third step requires an internal validity check on the coded data. In this study, this was achieved by comparing narratives with recorded interviews and coding the data on two separate occasions. The fourth step requires a reliability check of the data. This was done by cross-checking the two sets of coded data and checking with participants to ensure that their lived experiences were surmised correctly. The fifth and last step requires tabulation and reporting of results. This was executed through tabulating results to express emergent themes and disseminating the information to the stakeholders in the school and in the scholarly community.

The following discussion details the experiences of the cooperating teachers with video-mediated conferencing in their individual rural setting and circumstances, the lessons that they learned, and how video-mediated conferencing could be implemented in other K–12 settings to prepare future teachers.

Results and Discussions on Emergent Themes

Four themes emerged from the data from the cooperating teachers. They were:

Risk-taking is a crucial dimension of being a featured teacher in a video conference. All teachers mentioned some degree of nervousness when the videoconference concept was presented. Even after being reassured by the college teacher/supervisor that their individual characteristics were desirable, experienced teachers still expressed the desire to pose and look good for the viewing audience. However, rather than being viewed as either negative or positive, these authentic experiences are necessary for potential teachers to see how both children and teachers handle disruptions. Implicitly, it conveyed the message that a teacher must be ready for unplanned events. Examples of the cooperating teachers' comments about their disposition toward taking risks include:

> At first I declined her request to demonstrate before interns, as I felt a sense of insecurity and intimidation teaching before adults. Although I have more than 40 years of experience in the field of education, most of my teaching has been done behind closed doors and in front of elementary students. Teaching my fifth graders is straightforward, uncomplicated, and comfortable for me. However, the university supervisor told me that she wanted a "seasoned" teacher who had used little or no technology in lesson preparation. She wanted someone who was willing to demonstrate to new educators that veterans are continuous learners. With this in mind, I began to understand that this might be a rare and ideal opportunity not only for me to grow as an instructor, but my students would benefit greatly from the experience as well. (Newell-Byrd)

> This technology gives university students the opportunity to observe real classrooms, warts and all, without being physically intrusive. (Harrell)

> When using technology in the classroom, expect glitches. When hundreds of students are logged on to a county system at one time, problems happen. Have a backup plan in place. I have been fortunate enough to have an intern. Having another adult present in the classroom is very beneficial for my students. It greatly decreases wait time when a student is unsure of something. My intern was invaluable to me during the videoconference. If one is alone, they should definitely develop a working relationship with the technology representative, just in case an issue occurs in the class and their help is needed. (Harrell)

Video-mediated conferencing enhances children's participation and on-task behaviors. All teachers noted that their children were enamored with their inclusion in a live television broadcast. Beyond the infatuation of being apart of a live broadcast, children wanted to be observed by others. Such an event correlated with their egocentric stage of development noted by Piaget, in which children harmlessly believe that life is all about themselves (Huitt & Hummel, 2003). Teachers also noted that children who sometimes are easily distracted were able to stay on task and meet the goals of the lesson. Instances of the children's behavior and response to video-mediated conferencing are noted below:

> My goal for the videoconference lesson was to create a PowerPoint slide presentation that would increase comprehension and stimulate interest, especially with the boys. It worked; even the most reluctant learners participated in the lesson with the laptops. Discipline problems and hyperactivity were channeled into greater concentration and achievement. Students worked together cooperatively in diverse small groups to answer questions about the war and created their own short slide presentation. So, if the students had been previously nervous about the videoconference, they completely forgot about being filmed once the lesson progressed. Time passed by quickly and most students were disappointed when the class period ended. They were completely absorbed in using technology and actively engaged in learning. Each child commented about how much he had learned, and they all wanted to repeat the experience. The lesson was a great success. (Newell-Byrd)

> I really see that video-mediated conferencing motivates creative and effective teaching strategies. The children and the parents were excited about the use of a camera in the classroom. Therefore, using video-mediated conferencing technology in the classroom in addition to textbooks, pencil, and paper enhances student focus and interest, extends the attention span of reluctant learners, inspires greater participation in the discussions groups, and produces higher test scores. (Newell-Byrd)

Video-mediated conferencing encourages critical thinking and reevaluation of assumptions. Teachers are busy and frequently do not have time to review the events of the day with teacher candidates. Therefore, teacher candidates may leave with incorrect conclusions about their observations. In addition, cooperating teachers may not have time to reflect upon the nuances of their own behaviors in order to support teaching and learning. Subsequently, the pre- and postmediated portions of the videoconference, times in which two-way discussion between the university partners and the school partners occur, allow each party the opportunity to critically reflect and reassess their assumptions. In fact, one teacher mentioned that she really needed to question herself more to teach better so that she could meet the needs of her students. Such findings coincide with the work of Kendall (1992), who noted in his study on the benefits of telecommunication in rural areas that colleges and public schools could develop mentoring opportunities via technological devices. One illustration of a critical thinking and revaluation moment is noted in the following comment:

> The videoconference was scheduled so that my intern and I could answer questions from the university students immediately after the lesson. The college students had been watching closely, as their questions proved. They were interested in the diversity of my students and mainstreaming was discussed. They also asked about integrating subjects into one lesson. Because of their earnestness, it was apparent that they benefited from the videoconference experience. (Harrell)

Teacher change can be fostered through collaborative efforts involving video-mediated conferencing. Many experienced teachers have not had access or sufficient professional development in areas that are now mandated in teacher education programs. For example, when teachers graduated more than 20 years ago from teaching institutions, mandates in technology were not the norm. Therefore, to cultivate new skills successfully, teachers need meaningful experiences and sufficient support from their school and university partners. Examples of what happens when learning is fostered in a collaborative manner are noted below:

> I know that this was a great opportunity for prospective teachers. But beyond that fact, this was a life-changing experience me. I say this because in my case, I now feel more competent with using technology. For example, I have checked out the mobile laptop and video equipment more than I have ever done in the past. My children saw this and got so excited and stated that they really knew that these lessons were going to be different and exciting just because of the equipment in the room! I am also more confident with trying skills such as finding examples on the Internet, communicating via the Internet, and developing PowerPoint and graphic representations for my children. In fact, when I finally gained an understanding of video streaming through my association with the university, prior to their termination due to a lack of usage, I started requesting the video vignettes of commercial recordings that were allotted to our school. In terms of the prospective teachers, the ability to teach in my classroom and have university students observe and ask questions immediately after the lesson is tremendously advantageous and beneficial for all involved. Hopefully the use of video-mediated conferencing will enhance the learning process for future teachers as it did in mine and in other classes. (Newell-Byrd)

> As a teacher who started her career 30 years ago, I did not learn to teach using technology. It is an area where I feel uncertain, even after taking several classes. My students help me learn more about it all the time. Therefore, when I was approached about video-mediated conferencing by the university supervisor, I was doubtful at first. But I conceded eventually, and during a discussion, the university supervisor and I discussed my classroom dynamics and the needs of her university students to make their textbook understanding come alive in the classroom. In part, I was assisted in developing a lesson that infused technology during a videoconference because I happened to be taking a class on digital imaging at the time. My teacher encouraged me to participate in the event and supported me in my efforts. For example, he taught me how to incorporate videos with a PowerPoint presentation. Unfortunately, downloading the presentation onto a school computer that was not as up to date became the biggest problem. However, with the help of my school's wonderful media specialist and technology support personnel, it worked. But this was only the introduction to my lesson. Still in all, I was proud of myself. For the rest of my lesson, I became the facilitator; my students became the technology users within their individual groups and I was the support person. (Harrell)

Implications

Developing new branches of research that support the learning of diverse stakeholders can be an enlightening practice not only for the researcher, but for those who dare to share their personal stories and narratives. This form of story sharing forms a collaboration that, in Collins' words, is "an interactive process of looping back and forth, developing ideas, pausing

and thinking, discussing ideas, building frameworks, seeing it break under the weight of evidence, rebuilding it yet again, and asking what it all means. Repeating this process over and over again will create a coherent framework of concepts that mesh together" (Collins, 2001, pp. 10–11). Such interactive processes occurred in this study with the veteran teachers and emergent trends evolved by asking continuously, "What does this endeavor, the usage of VMC, mean to us?"

In addition, with the process of asking ourselves, "What does it all mean?" within the framework of Collins' construct (2001), we derived implications from the study. Such recommendations could support other school and university partners in their quest for successful integration of video-mediated conferencing within a K–12 school setting.

Cooperating teachers need to strive for realism and not for perfection during demonstrations. Because it is important for teacher candidates to see how an experienced teacher handles unexpected situations, cooperating teachers should not try to create a perfect environment for teaching demonstrations. Instead, cooperating teachers should be encouraged to allow all issues to be witnessed by the teacher candidates. Such events are the essence of teachable moments and, if the preservice teacher had been physically in the classroom, he or she would have witnessed the situation firsthand.

School–university partnerships can be fostered through 21st-century technologies. The most effective model for supervision is the traditional triadic model that includes cooperating teachers, university supervisors, and teacher candidates (Giebellhaus, 1995). However, if cooperating teachers are concerned with the investment of the university partners due to their lack of communication and time given to the field process (Lelle & Kotrlik, 1987: Deeds, Flowers, & Arrington, 1991), a true collaborative model is a challenge. Some hindrances to an effective partnership are due to the distances of remote placements from the university, increases in travel costs, and time conflicts with the university partner's other obligations on campus and in the community they serve. VMC responds to these challenges by utilizing 21st-century technology to connect all three participants in a collaborative manner. Therefore, VMC is a possible means for providing positive connections between university and school partners well versed in teacher preparation by allowing both partners to simultaneously support teacher candidates in a professional manner.

Informed and supportive stakeholders within the school community can impact participation and learning from newly implemented VMC supervision techniques. Researchers have found that experienced cooperating teachers can support faculty in the examination of teaching (Ma, 1999; Stigler & Hiebert, 1999), which can further the research base for effective teaching and learning. However, if the conduits of the research are not heard, addressed, or supported as needed, such investigations could be stymied. In this case, it is evident that the participants felt supported not only by the university faculty, but also by the well-informed principal and parents who chose to allow their children to participate in the study. Moreover, the children actively encouraged the usage of VMC by constantly asking when they could be on the live television broadcast after an explanation by the teacher on VMC and subsequently acted in a favorable manner while filmed. Therefore, dispositions of stakeholders cannot be overlooked or underestimated when new technologies are introduced.

Limitations

The researcher played the roles of university supervisor, course instructor, and field placement coordinator. Consequently, due to the complexity of the researcher involvement, the researcher obtained an insider's perspective. Therefore, autonomous objectivity as noted by Geertz (1997) was not possible within the VMC learning community. Moreover, as with all case studies with low participant rates, generalizability is limited.

The interest of children in the activities during VMC may also be misleading due to the novelty effect, as reviewed in Distinctiveness and Memory (Hunt & Worthen, 2006). In other words, if VMC became a routine experience, children may revert back to their normal level of stimulus during instructional periods, and VMC's power to increase learning would be nullified.

Concluding Thoughts

In an attempt to increase the learning of teacher candidates in the initial study via VMC, it was incidentally unearthed that cooperating teachers also benefited from the intervention. Therefore, to record this additional strand of learning, a new strand of research sprung from the initial study that allowed the teachers to share their stories and recollections on the impact of VMC as they concurrently supported teacher candidates involved in a social studies practicum. Notably, cooperating teachers, who provided a valuable service to the university during the practicum studies, refined their own skills and dispositions through the collaborative process. These results coincide with Raphael's (2004) findings that cooperating teachers can develop new skill sets when they collaborate with university faculty that can be applied to the supervision context. In fact, Raphael suggests that collaborating teachers are often adept at grabbing hold of a piece of a larger initiative or trend and implementing one or two segments. Such an event occurred within this study when the cooperating teachers were challenged to reconstruct their traditional method of supervising learners by using the VMC format. The impact of VMC on cooperating teachers as well as teacher candidates should be further investigated and disseminated to promote more online learning community research among one of the most crucial members of the practicum experience, the cooperating teacher. For, as stated by Heibert and Stigler, professionalism itself is at stake:

> When teachers recognize that knowledge for improvement is something they can generate, rather than something that must be handed to them by so-called experts, they are on a new professional trajectory. They are on the way to building a true profession of teaching, a profession in which members take responsibility for steady and lasting improvement. They are building a new culture of teaching. (Heibert & Stigler, 2004, in Schmoker, 2006, p. 118)

Therefore, when researchers are investigating the supervisory triad, one important member of the cast, the cooperating teacher, could provide valuable insights as the conductor and the viewer of the VMC experience.

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