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Using Video in Urban Elementary Professional Development to Support Digital Media Arts Integration

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Abstract

Using ethnographic methods, this article looks closely at how a team of first-grade teachers and digital media artists in an urban elementary school used video in innovative ways during professional development over the course of one year. Extending a body of literature that primarily documents how video can be used as a tool in professional development to develop pedagogical knowledge and support reflective practice, this article documents how teachers in this partnership also consumed, connected through, and created videos to deepen digital media content knowledge and showcase their teaching and learning with a broader audience as part of a school-wide culture that attempted to create a “new ethos” (Lankshear & Knobel, 2007) of digital media arts mindsets.

Current teacher assessment systems ranging from the edTPA to the National Board Certification program have employed video as a tool to analyze, reflect on, and evaluate teaching and learning. Video has been employed for similar purposes in preservice education courses and in-service professional development (PD) (Seidel, Sturmer, Blomberg, Kobarg, & Schwindt, 2011), where it has helped teachers to think deeply about pedagogical issues

(Wang & Hartley, 2003), focus on instruction rather than classroom management (Zhang, Lundenberg, Koehler & Eberhardt, 2010), and compare their enacted practices with their espoused beliefs about teaching and learning (Bryan & Recesso, 2006).

In our year-long ethnographic research on digital media arts integration at an urban elementary school, we documented additional innovative ways that videos were used during teacher professional development. We look closely at how Convergence Academies, a digital media arts integration program, utilized video in a professional learning community (PLC) of first-grade teachers and digital media artists, adding to a body of literature that primarily documents how video use in PD promotes pedagogical knowledge and supports reflective practices. While the teachers at Convergence did use videos in these ways, they also consumed and connected through videos to build their digital media knowledge (e.g., classroom technology integration strategies; play-based learning strategies) and created videos to showcase teaching and learning to a broader audience. Rather than teachers using video primarily as a reflective tool, it was integrated into a school-wide culture that attempted to create a “new ethos” (Lankshear & Knobel, 2007) of digital media arts mindsets.

Encouraging Both New “Technical Stuff” and New “Ethos Stuff” Through Digital Media Arts Integration in K–12 Schools

Lankshear and Knobel (2007), in their description of new literacies, or forms of

literacy made possible by recent digital technologies, discuss both new “technical stuff” (i.e., digital technologies and applications) and new “ethos stuff” (i.e., a mind set viewing today’s cyberspace world as significantly different than the physical world of the past) permeating today’s digital media landscape. The ethos stuff, they claim, values collective intelligence, open and fluid space, and participation-focused production that uses tools for mediating and relating. They share the example of using new technical stuff (e.g., PowerPoint) in an old way (e.g., to tell a narrative story) as not being representative of new literacies because it is missing this important ethos stuff. Digital media learning in K–12 schools, then, is about both tools and dispositions.

Hobbs (2010) similarly describes digital and media literacy as a “full range of cognitive, emotional, and social competencies that includes the uses of texts, tools, and technologies; the skills of critical thinking and analysis; the practice of message composition and creativity; the ability to engage in reflective critical thinking; as well as active participation through teamwork and collaboration” (p. 17). Furthermore, she suggests that “In many schools, despite significant investment in technology, teachers are not making effective use of the engaging instructional practices of digital and media literacy . . . simply buying computers for schools does not necessarily lead to digital and media literacy education” (Hobbs, 2010, pp. 25–26).

This article documents PD attempting to do just that—integrate technological

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tools and a deeper ethos around the digital media arts in order create a “new culture of learning” in schools that better reflects the way students learn in the digital age, and “recognizes the importance of critical thinking, problem-solving, collaboration and creativity over rote memorization of content and knowledge consumption” (Convergence Academies, 2014, p. 8).

A “New Culture of Learning” at Convergence Academies

Convergence Academies is a whole-school digital media integration reform model that was implemented at two under-resourced urban public schools over 3 years. We spent a year observing their partnership with Smith Elementary (names of schools and participants are pseudonyms), a neighborhood school in Chicago, IL, with approximately equal populations of African American and Hispanic students in pre-K–8th grades. While the Convergence Academies model consists of several initiatives, in this article, we focus on their teacher PD.

The hallmark of the PD model at Smith was the establishment of professional learning communities comprised of classroom teachers and practicing digital media arts professionals. These professionals included digital media mentors (DMMs)—designers and artists who were also part-time Convergence Academies employees—and a media integration specialist (MIS), or full-time school-based coach who led PD while drawing upon educational expertise in the digital media arts. In addition to implementing “residency units” between DMMs and teachers, the MIS and one DMM per grade team engaged with teachers in weekly PD meetings.

The Convergence Academies model sought to address a major problem the program’s creators saw in schools: that many teachers and educational leaders lacked the supports they needed to integrate a “new culture of learning” into everyday school culture, climate, and curriculum. They attempted to foster this new culture in part through PD focused on both new technical stuff and new ethos stuff. New technical stuff at Convergence Academies included, for

example, the use of iPads and digital cameras to record and share student learning, Google documents for unit planning, and regular access to and use of tools like laptops, green screens, and audio recorders. PD focused even more substantially on new ethos stuff; it was designed around three “participatory practices for learning and engaging in the digital age” (Convergence Academies, 2015, p. 15) that were inspired by Jenkins et al.’s (Jenkins, Clinton, Purushatma, Robison, & Weigel, 2006) work on developing a “convergence culture.” These participatory practices were titled “The 3 Cs” and included (1) consuming a variety of texts in critical ways; (2) connecting social worlds by engaging in shared social purpose and civic life beyond the classroom; and (3) creating original works through design and production. To apply the 3Cs to the classroom, instruction at Convergence Academies was framed around six related “pillars of connected learning” that resonate strongly with new media literacies skills and dispositions (see Figure 1). The Pillars, as they were called by Convergence participants, emphasized the following principles:

- collaboration (interdependence, skill-sharing, and divergent thinking),
- play (opportunity and permission to experiment and figure things out).
- choice of expression (ownership over how we learn and communicate),
- authentic participation (relevance and meaning beyond the classroom),
- critical response (analysis, interpretation, and response to media messages),

- iterative learning (valuing feedback and revision of our ideas to improve our work).

The Pillars became a cornerstone of teacher PD at Smith. Each quarter, the teams of teachers chose one pillar to learn about, explore, and design for in their classrooms. In their weekly PLC meetings, they strategically designed activities to enact the pillars.

In this analysis, we focus specifically on the use of video in the first-grade PLC to explore the pillars of play and collaboration. Video was used to develop teachers’ definitions for these pillars, to give them opportunities to see the pillars enacted, and to provide a medium for teachers to showcase their learning about digital media dispositions.

Literature Review

Video and Professional Development

Video analysis is a tool often used in pre-service education courses and in-service PD sessions (Seidel et al., 2011). In video analysis, prospective and practicing teachers typically watch selections of classroom practice to deepen content knowledge or to reflect upon teaching and learning in their or another teacher’s classroom. Such videos have been found to increase teacher engagement (Seidel et al., 2011) and also to promote self-reflection (Bryan & Recesso, 2006; Calandra, Brantley-Dias, & Dias, 2006).

The potential benefits of teachers’ video analysis have been widely documented. Wang and Hartley (2003), for example, describe video technologies as

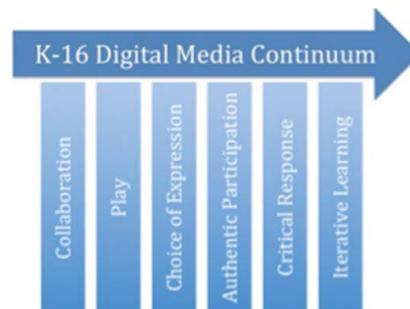


Figure 1. “Pillars of Convergence Academy Model” by Convergence Academies, 2015. © 2015 Columbia College Chicago. Reprinted with permission.

“having the potential to document the richer, more complex events and situations of teaching and learning” (p. 112). Zhang et al. (2010) similarly describe how video analysis has been shown to help teachers “[shift] the focus from classroom management to instruction” (p. 454).

Most commonly, the purposes of video analysis are to build pedagogical skills and to promote reflection among prospective and practicing teachers. In teacher education and PD, videos are often used to share examples of high-quality teaching and learning or innovative instructional techniques. Videos are also used to promote reflection. For example, Bryan and Recesso (2006) used a Video Analysis Tool to support both individual and collective reflection among preservice secondary science teachers. They promoted reflection by encouraging prospective teachers to compare video clips of their practice with their written beliefs about teaching and learning, and by discussing these clips with a group of their peers.

The use of video during teachers’ professional development tends to focus on improving instructional practice. During PD at Convergence Academies, video was used in ways that resonate with this existing literature—teachers did reflect on videos to analyze student learning, and—less frequently—to analyze their own pedagogical practices. However, video use at this site was also unique; over the course of a school year, we saw video become embedded in the professional culture or ethos of the elementary school, with teachers consuming, connecting through, and even producing videos as they further developed their understandings of digital media and its affordances.

Digital Media Literacy and Professional Development

Teachers’ professional development has often been identified as a potential space for digital media learning. For example, Pianfetti (2001) called for increased professional development aimed at building teachers’ basic digital literacy skills, such as using word-processing documents and

e-mail. While much of this professional development included training in various computer programs, Pianfetti highlighted particular professional development models that afforded teachers time to play and experiment with technological tools. Lawless and Pellegrino (2007), in their review of the literature on technology and professional development, note that extant research on digital literacy and PD can be divided into three categories: PD focused on “the integration of technology into instruction,” PD focused on “learning about technology (e.g., what types of software and tools may be available),” and PD focused on “learning how to use a particular piece of software” (pp. 581–582). Interestingly, however, little research exists that utilizes the affordances of video to educate teachers about digital media within the context of professional development. While some professional development platforms (e.g., Massively Online Open Courses) might use video in some form while encouraging teachers to engage with digital media, we did not find evidence of empirical scholarship that examines video used in an ongoing, in-person professional development setting for teachers. It is because of the way that this particular site extends existing literature around teachers’ use of video in PD that we focused our analysis on this topic.

Methods

This qualitative case study is a part of a larger research study of teaching and learning at Convergence Academies. Specifically, we sought to answer the following research question: How do

elementary school teachers in a professional learning community focused on school-wide integration of digital media use videos to develop and extend their understandings of digital media?

Participants

We observed one digital media mentor (Erol), one media integration specialist (Claire), and five first-grade teachers participating in weekly PLC meetings focused on digital media integration (see Table 1 for focal participants). The first-grade teachers team taught by subject area, with a monolingual and bilingual science/math and English Language Arts (ELA)/social studies team. A special educator also attended the weekly meetings. This article highlights the participation of one of the teachers, Adelle, whom we interviewed and observed teaching an instructional unit she co-designed and implemented with a DMM named Wade.

Data Collection

In this article, we draw from research collected over the course of the 2014–2015 school year. Primary methods of data collection included participant observation, semistructured interviews, and artifact and document collection. Participant observation took place at weekly first-grade team meetings ($n = 32$) and in two focal teachers’ classrooms as they co-planned and taught residency unit lessons with a digital media mentor ($n = 11$). Observations were made by one of three members of the research team, and were documented through jottings and audio-recordings that were later developed into descriptive and reflective field notes

Table 1. Focal PLC Participants

| Focal participant name | Role in first-grade PLC |
|------------------------|--|
| Claire | Media integration specialist (MIS) and arts educator with more than 10 years of experience who worked full-time at the school and attended weekly meetings with the first-grade team. |
| Erol | Digital media mentor (DMM) and adjunct university faculty member who specializes in fine arts. He participated in weekly meetings with the first-grade team and collaborated with Maria on an “inventions” unit. |
| Wade | Digital media mentor (DMM) with a background in multimedia and recording who collaborated with Adelle on a “heroes” unit. |
| Adelle | Focal first-grade monolingual teacher. |

(Dyson & Genishi, 2005). Semistructured interviews were also conducted with two focal teachers, the digital media mentor, and the media integration specialist ($n = 4$). In these interviews, we asked participants about their experiences with Convergence Academies, their perspectives on collaboration with team members, and their use of video in grade-team meetings. Artifact and document collection occurred during observations (e.g., student work, unit plans and lesson plans, instructional materials, rubrics, teachers' reflections and writing about their professional learning on a school-sponsored blog).

Data Analysis

Using constant comparison (Charmaz, 2006), we analyzed data in iterative cycles throughout and following our year of participant observation. As we read across the data trying to understand how professional development was supporting new understandings of digital media arts teaching and learning, we realized that teachers used published and self-produced videos across multiple professional development activities, including professional reading, collaborative inquiry into student learning, and observations and feedback. We then coded to identify any uses of video across the data set, and organized these codes into three primary categories: (1) consuming videos (i.e., engaging critically with both pedagogical and nonpedagogical videos to build content knowledge around digital media); (2) connecting through videos (i.e., collaborating in a nontraditional PLC that brought together digital media artists and teachers to document and inquire deeply into teaching and learning); and (3) creating videos (i.e., composing and sharing videos to document teaching and learning). These categories correspond to Convergence Academies' 3Cs, or three "participatory practices for learning and engaging in a digital age" (see A "New Culture of Learning" at Convergence Academies section).

We organize our findings around these three categories, offering short vignettes in each section that serve as telling moments illustrating innovative

uses of video in the first-grade PLC. We chose these vignettes because of their potential to extend accounts of teachers' video use in developing digital media content knowledge in PD in the existing literature. A final step in our analytic process was a search for discrepant evidence—counterexamples that problematize the use of video in this professional learning community. We highlight these counterexamples—and the tensions in using video in PD that they point toward—at the end of each section of our findings.

Findings

Here we illustrate the varied and innovative uses of video in the first-grade professional learning community (PLC) at Convergence Academies, documenting how teachers consumed, connected through, and created videos to build and deepen digital media content knowledge and to share their teaching and learning.

Consuming Videos to Build Digital Media Content Knowledge

During PLC meetings, the DMMs and classroom teachers watched both pedagogical and nonpedagogical videos to build their content knowledge around digital media. Unlike many of the examples of video study in the literature (Gaudin & Chalties, 2015; Zhang et al., 2011), these videos were used intentionally to develop digital media content knowledge, rather than to study pedagogical strategies. Videos were often positioned as "professional reading," and were used to develop teachers' understandings of the digital media principles of play and collaboration. We draw the term "consume" directly from Convergence's framework, and want to highlight that they understood consumption to be an active process of critical engagement. The teachers did not passively consume content; they interacted with the videos they watched in a variety of ways—thinking about them, discussing them, and making changes to their practice because of them.

For example, at the first team meeting of the school year, the teachers decided to focus their professional development

on play, one of Convergence's pillars of digital media learning. At this meeting, several teachers expressed reservations about incorporating play into their practice, with one asking, "What are acceptable forms of play in the classroom?"

The conversation turned to board games, and the teachers described ways that they had used games like *Operation* in their classrooms. Before their next meeting, Claire, the Media Integration Specialist, remarked, "We might need to deepen our understanding of [play] before diving in too deep."

At the next meeting, Claire and Erol, the digital media mentor, brought in a video clip from the YouTube channel *vSauce*, titled "Why Do We Play Games?" (<https://www.youtube.com/watch?v=e5jDspIC4hY>). In its opening scenes, the video's narrator bounces a soccer ball and turns to the camera to ask, "Why do human beings play games?" Citing computer scientist Chris Crawford (1984), he begins to define a "plaything" as something both "fun" and "interactive" and goes on to articulate the differences between "toys" and "challenges."

After watching the video, the teachers discussed how it had changed their thinking about the principle of play. They highlighted words from the video that stood out to them, such as "goal oriented," "conflict," and "self-directed." They described how their definitions for play had been expanded and problematized; they now noticed nuances between games, toys, and puzzles that they had not seen before.

During another meeting in November, the teachers and mentors met to unpack and define their newest digital media content principle: collaboration. Erol introduced the day's task, which included watching and interpreting two videos about collaboration. The first video was titled "Five Year Olds Pilot their Own Project Learning" (<http://www.edutopia.org/kindergarten-project-based-learning-video>) and showed footage of young students engaging in collaborative, interest-driven projects (e.g., students crafting a large model airplane and role-playing captains, mechanics,

and even immigration officials). Immediately after watching the video, the teachers remarked on the authentic collaborative activities shown.

Erol introduced the second video by saying, “This will talk about it [collaboration] from a very abstract perspective . . . it takes a while to sink in.” This video featured the voice of a communications professor, who explained principles of collaboration over animations (“The Collaborative Challenge,” https://www.youtube.com/watch?v=iN_A7keXtVg). One of the major focuses of the video was the distinction between collaborative advantage as “new ideas,” “strengthened networks,” and “innovative solutions,” versus collaborative inertia as “endless discussion” and “unproductive meetings.”

As these two vignettes suggest, consuming both pedagogical and nonpedagogical videos supported the teachers’ development of digital media content knowledge. Specifically, the videos helped the teachers expand their definitions of digital media principles like play and collaboration. These videos served as touchstone texts throughout the rest of the school year. For example, the first-grade teachers wrote about collaborative advantage and inertia in a blog post in December, and later discussed it as they planned collaborative lessons in February.

While nonpedagogical videos certainly helped the teachers to expand their digital media content knowledge, their integration into a pedagogically focused professional learning community of teachers was not without challenges. These videos, which focused on contexts beyond classrooms and schools, were described by a member of the PLC as “esoteric” and “heady.” Interestingly, the teachers also expressed concerns about the transferability of activities in more pedagogical videos. For example, after watching the video “Five Year Olds Pilot their Own Project Learning,” the teachers discussed the unique circumstances of the featured classroom, stating, “They had 18 kids and 3 adults,” and “Sometimes the resources aren’t there.” Despite these challenges, the teachers frequently

referred to the videos throughout the year, and came back to them when sharing their learning about play and collaboration.

Ultimately, while videos have been used in the literature to support and refine teaching strategies, we saw few examples of videos used to develop teachers’ content knowledge in place of professional texts. This innovative use of video at Convergence Academies—its consumption for the development of content knowledge—supported PD in the PLC.

Connecting Through Videos of Teaching and Learning

In addition to watching published videos, the teachers and digital media staff regularly recorded videos of students and brought them into PLC meetings for collaborative reflection. Over the course of the school year, these videos became integrated into the school culture and were leveraged by the teachers in a variety of ways. For example, they used videos to closely examine clips of classroom-based student learning in action, and to document and share students’ participation in nontraditional learning experiences. We argue that these video-based practices fostered innovative connections between monolingual and bilingual teachers, digital media artists, and school administrators. They also helped foster a schoolwide culture of collaboration where distributed expertise could be drawn upon in meaningful ways.

The PLC teams regularly collaborated to examine videos of student learning as they attempted to enact the pillars of connected learning. These videos helped the teachers look closely at student learning in a way that they couldn’t in their everyday teaching, when responsibilities associated with classroom management and lesson pacing took center stage. It also allowed them to hear alternative perspectives from digital media artists and the media integration specialist about what was happening and why. For example, in October, during their inquiry into the pillar of play, Claire began a PLC meeting by stating, “So this

week we are doing a video study. We’ll focus on what we see and hear with no judgment. Then move to what was meaningful, stood out to you, [was] cool, and clarifying questions.” One of the math teachers showed a video clip of a small group of students sitting in a circle on the rug while playing a subtraction game using cups filled with pennies. The teacher told the PLC that students were playing “a combination of the penny grab and penny cup game . . . [it] was an invention of them combining.”

“Cool,” remarked Claire, “So they’re starting to *hack* these games.” Over the course of the quarter, the team had begun discussing hacking—or creatively redesigning the system or rules to accomplish a goal that differs from the original purpose—as an aspect of play. Through this comment, Claire helped the teachers draw explicit connections between the students in the video and the construct of play.

Throughout the rest of their discussion, the teachers used this video and others like it to expand their understandings of play. In a post they wrote for the school’s blog later that day, the teachers reflected that, moving forward, they could “Allow students to design games that include rules and challenges” and outlined their plan to practice hacking games themselves during their next team meeting. In this instance, Claire’s digital media expertise allowed her to bring a unique perspective to video-watching of student learning, and to name what she saw them doing using digital media terms and concepts, like “hacking.” The teachers’ pedagogical expertise allowed them to integrate such knowledge into curricular planning.

In addition to using videos to document planned curricular activities, the teachers also recorded nontraditional student learning experiences (e.g., play and collaboration activities on the playground that were not subject specific). For example, during a grade-team meeting in February, Claire wanted the team to share videos to showcase “really concrete examples” of collaboration. She said, “We know that saying ‘Work together!’ doesn’t actually affect learning.

We need something that's going to help you design [collaborative] activities.”

Adelle offered an example, saying that she wanted her students to collaborate to build a snowman. Claire suggested that she take up this idea and document her students engaging in this nontraditional learning experience through video. One week later, Adelle brought a video of her students building a snowman to the PLC, and Claire challenged her to explicitly name the ways her students were collaborating. Claire said, “Okay, so let's think about that collaboration. There's distributed [collaboration], like each person makes a different part.” Adelle responded, “Or roles, like the snow gatherer? The snow shaper?” As the PLC team members continued to discuss the ways that students might collaborate, Claire began to jot down their thoughts. A chart soon developed that they later formalized as a “spectrum of collaboration” and used to plan collaborative classroom activities; the chart included concepts related to collaboration that had come up in their conversation, such as “distribution” and “roles” (see Figure 2).

In an interview a few months later, Adelle identified the spectrum created while watching the snowman video as one of the most helpful activities in the PLC. She reflected that it had helped her

think about how to scaffold collaboration better. Again, this example highlights how teachers and digital media experts were able to connect in meaningful ways by watching videos of student learning together. Teachers could try out new ideas with students, document students learning, and lend a pedagogical lens to conversations. Digital media experts could support understandings of student learning in terms of digital media concepts, helping teachers to name and theorize what they were seeing in meaningful ways.

Video documentation and collaborative reflection in the PLC became part of Smith Elementary's school culture with Convergence Academies. Teachers and digital media experts regularly watched videos together in order to reflect on student learning and connect in meaningful ways. However, we saw few examples of teachers sharing the videos they analyzed together with their students—an area we think is ripe with unrealized potential.

Additionally, in each of the examples already described, the teachers used videos to observe students rather than to reflect on their own practice. When teachers did appear on video, their colleagues were highly complimentary and resisted critiquing one another's practice. While we recognize that this approach may be rooted in creating a positive cul-

ture in the PLC, we believe that much might have been gained had the teachers observed and reflected upon their teaching, in addition to student learning.

At Convergence Academies, then, video was often used as a tool to analyze student learning, which is consistent with the literature. However, adding to the scope of how teachers reflect on videos represented in the literature, the teachers also documented nontraditional learning experiences and—most importantly—connected with digital media experts to make sense of student learning. During that process, teachers and digital media experts were all able to bring particular expertise to the conversations that resulted in deeper digital media knowledge and pedagogical knowledge. These reflective videos became deeply embedded in the school culture, with teachers taking videos on their cell phones and iPads, and sometimes uploading short clips to the school's blog. At the same time, however, we noticed unrealized potential, as the teachers rarely connected with students to analyze videos and were often hesitant to watch and critique their own teaching practice.

Creating Videos to Showcase Digital Media Teaching and Learning to a Broader Audience

At Smith, teachers were expected to document and share teaching and learning related to the pillars with the school community. The first-grade teachers regularly used online composing practices to share with colleagues (e.g., creating weekly blog posts after their team meetings that often included short video clips). Sometimes the teachers also composed videos that were more highly produced and edited.

For example, in October the team met to reflect on the pillar of play that they had been exploring for the quarter. Claire asked the teachers how they might synthesize their learnings about play, and suggested that the team start with a “retrospective journey through time of all the things that would be helpful to share with other teachers at Smith.” The

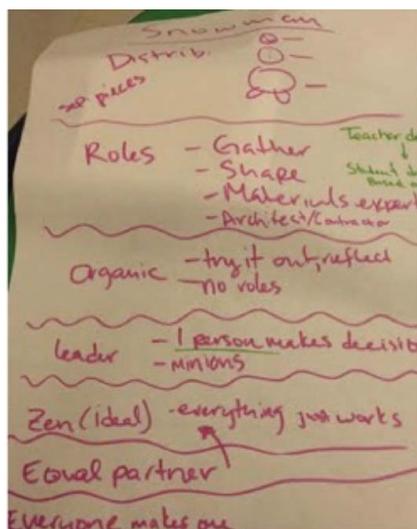


Figure 2. A charting exercise to begin developing a “spectrum of collaboration.”



Figure 3. A still from Adelle's video of her students playing a hacked *Guess Who?* game.

teachers discussed numerous ideas from throughout their study of play, what they most wanted to share with teachers at other grade levels, and how they might share this knowledge (e.g., on a blog post, in an in-person demonstration). They decided to each bring in a video of their students playing a game that they would develop and share on the blog.

The following week, the teachers brought in video clips of students playing the games that the teachers had hacked, or redesigned with new purposes in mind. They wrote scripts to help the audience understand what they were seeing, identified the most important parts of their video to include in the final piece, and recorded voiceovers with the support of Claire and Erol. The videos were assembled and posted in a blog post called "First Grade at Play." Adelle's video showcased students playing a hack of the board game *Guess Who?* (see Figure 3). In the video, she introduced the game and then students played while she read aloud a script she had prepared describing the purpose of the game, how students played it, and how it might be used in other grades or subjects.

This example highlights how the teachers sometimes composed videos to showcase their digital media teaching and learning to a broader audience of colleagues. Such regularly required sharing practices enabled the first-grade teachers to think about how to apply the pillars beyond their own students. Creating videos also helped some teachers develop technical capacities and skills that they later capitalized on in their work with students.

Later in the school year, for example, Adelle and Wade (her partner digital media mentor), created a collaborative video with students for their residency unit. With Wade's support, Adelle added a new multimedia component to her regular heroes unit focused on identifying their traits—a video compilation of photographs of historical moments featuring historical figures (e.g., Rosa Parks, Jackie Robinson, Cesar Chavez). Wade and Adelle helped students learn to use digital cameras, download images, use a green screen, and record and download audio. Students moved from taking individual portraits of one another to recreating group shots of candid historical moments as they analyzed "what makes a hero" (see Figure 4).

Ultimately, Wade and Adelle compiled students' photographs, audio-recorded them reading about why the figures were heroes, and added music to create a class video that was shown at an assembly for the students' families. The hero video allowed Adelle's students to develop digital media skills and to share their learning with another class, their families, and the principal.

These examples showcase how creating videos during PD helped the teachers learn about both the new technical stuff and new ethos stuff of digital media integration and multimodal production in ways that some of them also used later with students. It is important to note, however, that in the preceding examples the digital media staff primarily maintained control of the technologies and composing practices, rather than asking the first graders or teachers to engage in all aspects of creating. The Convergence

Academies staff, then, greatly scaffolded the video creation processes. It would be interesting to see how such work might be scaffolded over time to put more ownership on both teachers and students for composing all aspects of their videos.

While these examples map onto the literature about how video in PD supports the development of pedagogical and reflective practices, they also uniquely position teachers as creators. The opportunity to create videos in PD may empower teachers to show what they have learned in concrete ways and to distribute their productions to broad and diverse audiences, which we suspect is particularly important at a time when teacher evaluations are often reduced to rubrics completed by others.

Discussion and Implications

The first-grade teachers and Convergence Academies staff members utilized video in unique ways in their PD focused on digital media integration. They consumed videos that were both pedagogical and nonpedagogical in order to build their content knowledge around digital media. Teachers also connected with digital media experts through video documentation and collaborative reflection. Finally, teachers and DMMs collaborated to compose videos as a method to share and showcase their content and digital media learnings to a broader audience; this practice also helped some teachers develop technical capacities and skills that they later capitalized on in their work with students. Across these findings, the collaborations between teachers and content specialists (in this case, digital media experts) were central to using video in PD in meaningful ways and in deepening understandings of digital media arts tools and dispositions. As teacher educators, we are particularly interested in how to create and facilitate such collaborations to better help teachers consume, connect through, and create videos.

However, there were also numerous challenges to consider in the ways video was used in PD. Notably, when consuming nonpedagogical videos to think about the pillars, the participants sometimes



Figure 4. Adelle and Wade helped first graders recreate candid historical moments for their video about heroes.

saw them as too theoretical, and had trouble imagining how they might apply to their work with students. The teachers’ video reflection practices also highlighted tensions around “working in the open,” a highly lauded digital media principle. Even with scaffolds in place from Convergence staff, teachers were hesitant to work in the open by offering critical feedback on teaching practices to one another; instead, they preferred to focus primarily on how students were playing and collaborating with each other. Similarly, sometimes the teachers found working in the open by composing/sharing online to be problematic, worrying that they would “get in trouble” from the administration for the things they created—a valid concern, since we documented a negative response from an administrator to one teacher’s blog post. Finally, the Convergence Academies staff greatly scaffolded the video composing processes for both teachers and students, often maintaining primary control of

the technologies and composing practices. While teachers actually seemed to appreciate this, we wonder how to encourage the teachers to take more autonomy and control of the digital technologies during composing. These challenges help us think critically about video use in PD and teacher education. Along with the findings, they led us to a number of questions for the design of PD and teacher education attempting to use video (see Table 2).

Within the realm of the digital media arts, specifically, we saw video as a tool to support a “new ethos” of digital media mind sets (Lankshear & Knobel, 2007). At Smith, incorporating video into the fabric of PD built technical skills and contributed to a broader culture of digital media arts mind sets (e.g., centering collaboration, play, risk-taking, and distributed expertise). Overall, it seemed that the Convergence staff was integral to scaffolding and

“leveling up” all of the teachers’ video practices, ranging from consumption to connection and creation, often challenging the teachers to think about digital media content and student learning in new ways. This highlights once again the significant potential of long-term collaborations between content professionals (e.g., digital media experts) and teachers in teacher education and PD. It also reminds us that video in PD is an end to a means—in this case, a tool to support a “new ethos” (Lanshear & Knobel, 2007) of digital media mind sets and a “new culture of learning” in schools (Convergence Academies, 2015). In order to harness this tool’s potential, though, teacher educators and PD providers must clearly document and examine both innovations and challenges in video use, and consider how to foster the kinds of meaningful partnerships that deepen teachers’ active consumption, connections, and creations.

Table 2. Questions to guide considerations for the design of PD attempting to use video in unique and creative ways

| Consuming videos | Connecting through videos | Creating videos |
|---|--|---|
| <ul style="list-style-type: none"> •What videos might serve as touchstone texts in PD? •How might we invest and encourage teachers to take part in selecting these texts? •How do we push teachers beyond purely pedagogical texts while ensuring that these more theoretical or applied resources are meaningful? | <ul style="list-style-type: none"> •How can we create a course, school, or PD focus that supports regular, ongoing documentation of formal and informal student learning? •How do we make spaces for teachers and content experts (e.g., digital media) to collaboratively reflect on videos of student learning? •How do we encourage a culture of critique—not evaluation—where teachers feel comfortable offering critical feedback to themselves and their peers? •How do we support teachers to use videos for reflection with their students, too? | <ul style="list-style-type: none"> •How might we get technologies out of the hands of digital media staff/PD providers and into the hands of teachers and students? •How can we support teachers to work in the open, sharing their thinking and compositions online? •How might required and choice sharing be used with intention? |

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