Merging Out of School Learning Strategies with Academic Pursuits: Video Production for the Classroom Environment

By

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Abstract

While most academic settings do not capitalize on inherent participatory learning strategies, this dissertation demonstrates that educators can use video production as a conduit to the rich learning structure available through participatory cultures thereby merging out of school learning strategies with academic pursuits. In a series of three articles, I argue that critique of video can serve as a bridge in merging out of school learning strategies with academic pursuits; that video production because of its numerous working components lends itself to authentic collaborative learning; and that video production skills can best be evaluated through multimodal reflective assessments. Taken together, this dissertation illustrates how video production may be integrated into the formal classroom environment to bring the kind of purposeful, collaborative new media learning often found online and in out of school spaces into the formal classroom environment.

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Table of Contents

Chapter 1: Introduction and Overview

A lot has changed since I first picked up my father's Sony camcorder to document angsty teenage life in southern Illinois. My ode to teenage life now rests in a dusty VHS, a static object forever trapped in time. Today, I walk around with a video recording device in the palm of my hand. I can record everyday life--no longer full of the same teenage angst--or bring to life creative new ideas and share them with people all over the world within minutes.

Beyond my debut VHS, I really started working with video while partnering with PBS Wisconsin Education in developing Click, a professional community of educators and students across the state working to improve digital media production. As part of the development team, I visited schools, facilitated workshops with staff from PBS Wisconsin Education, and worked as a media mentor for PBS Newshour Student Reporting Labs. I teamed with the staff from PBS Wisconsin Education to bring 70 youth from around the state for the first ever Click Youth Media Festival. The following year, we brought 24 educators together for a three day intensive video production workshop for the Click Teacher Summer Camp. Through this work, I met talented and dedicated teachers who welcomed me into their classroom so that I could learn more about video production. I found that video production--much like the art projects and podcasts I'd assigned to my students throughout the years--provided students the possibility to express their ideas and reach a wide, authentic audience. However, unlike many of my multimodal assignments which still felt "school-like" these teachers were more successful as they supported students in learning more about a mode of communication that they were already using outside of school: video.

Outside of school, young people are continuously re-envisioning the way video can be used to entertain, to teach, to inform, and to connect with others. From viral sensations such as

unboxing videos and slime tutorials, young people have found a myriad of ways to use video as a creative communication and exploration tool. Through the process of imagining, planning, creating, sharing work on YouTube, and talking to peers around the world about their work, young video producers are engaging in purposeful learning driven by motivation and interest. When youth engage with peers in this way they are motivated by something much stronger than what they are presented with in school: a chance to explore and learn about something they care about with people from around the world. These learning environments, which Jenkins et al. (2007) coined "participatory cultures" are successful in promoting peer supported learning as members are motivated by the opportunity for communication and collaboration (Fields, Magnifico, Lammers, & Curwood, 2014). Peers provide feedback, share work, ask questions, and offer one another mentoring as they feel that their contributions matter (Jenkins et al., 2007).

While most academic settings do not capitalize on inherent participatory learning strategies, this dissertation demonstrates that educators can use video production as a conduit to the rich learning structure available through participatory cultures thereby merging out of school learning strategies with academic pursuits. In a series of three articles, I argue that critique of video can serve as a bridge in merging out of school learning strategies with academic pursuits; that video production because of its numerous working components lends itself to authentic collaborative learning; and that video production skills can best be evaluated through multimodal reflective assessments. Taken together, this dissertation illustrates how video production may be integrated into the formal classroom environment to bring the kind of purposeful, collaborative new media learning often found online and in out of school spaces into the formal classroom environment.

Structure of Dissertation

The chapters that follow this introduction are written as separate articles. Together, they demonstrate the affordances of video production in the classroom. Each article also stands on its own with its own theoretical framing, research methods, findings, and implications. In the following section, I summarize the theoretical orientation that drives this dissertation, detail the entire body of data I collected for this work, provide an overview of each chapter, recount the analysis methods used in each chapter, and present the contributions of my dissertation as a whole.

Theoretical Framework

This dissertation builds on sociocultural theories of learning, Constructionism, and New Media Studies. In particular, my research builds on sociocultural theories of learning in recognizing composition learning is an inherently social act (Brandt & Clinton, 2002; Brandt, 1990). Literacy cannot be viewed in absence of the power structures in which literacy operates (Brandt & Clinton, 2002). When students enter the classroom, each students' ideas, words, and actions are influenced by their background, culture, and personal experiences. Members of different communities not only talk differently, they have different habits, walk differently, and even use non-verbal gestures differently (Bahktin, 1981). Gee (2001) calls these discourses or "identity kits" recognizing that they are more than a way of communicating, but about enacting socially situated identities and activities. As human beings we are often members of more than one discourse community, which influences the ways we talk, write, read, act and what we value and believe (Gee, 2001; Lemke, 1995). As such, when students talk to one another about their work and co-create meaning, this meaning is also situated in multiple histories, cultures, and power dynamics (Brandt & Clinton, 2002; Brandt, 1990; Heath 1983). Students bring to the

classroom a variety of discourses and funds of knowledge that impact their ways of being. As a result, identity politics are ever at play in the classroom environment and greatly impact how students talk to each other, who is given the space and opportunity to talk, as well as the topics found valuable for discussion.

The classroom therefore is a complex environment: students enter from a variety of discourse communities and then must take on the discourse of schooling as well as a new discourse each time they enter a new classroom. The video production classroom creates further barriers as students must learn the language, practices, and expectations found in the field of video production.

Sociocultural theories of learning encompass both an individual's background and the moments of interaction in the classroom itself. In this dissertation, I build on Vygotsky's recognition that social interactions help develop higher order thinking skills and that this learning cannot be understood without considering the context in which this action occurs. As a result, the scope of this dissertation is such that I foreground the social interactions and background individual students' identities. This is not to say that these are not essential to understanding the learning that takes place through interaction, but that it does not fall within the scope of this dissertation. This is also a limitation of this study as it was difficult to understand how the moments of critique were impacted by individual students' identities and the existing power structures without additional data about each student's identity. Additional data would have allowed me to look more closely at the moments of critique from a critical perspective recognizing that language does so much more than convey information but allows composers to integrate their perceptions and offer their perspectives on a given topic (Gee, 2001).

In the composition and video production classroom, learning occurs during the social acts of sharing ideas, approaching challenges, and collaboratively problem solving (Pea, 1997). In the composition classroom, this act is heightened during the peer critique process. As students' ideas are put in contrast with their peers and they consider alternative viewpoints, students co-create knowledge. In this way, students become co-dependent on one another's ideas, efforts, suggestions, and criticisms (Bohemia & Ghassan, 2012). Learning takes place during critique as composers are presented with new and sometimes conflicting perspectives and are challenged to think about their work in a new way. This is the core way in which learning occurs (Lave & Wenger, 1991). Each suggestion, feedback, question, and criticism creates an obstacle and opportunity for growth. In the context of critique, learning to navigate discourse through purposeful use of language and rhetoric is necessary for advancing knowledge.

I build on the ideas of Constructionism in recognizing that through the act of creating an artifact--from a sculpture to a video--learners take their ideas, experiences, thoughts, and transform these into a different medium while negotiating meaning through complex dialogue with their peers. Through this process, young producers build relationships between their previous and new knowledge (Kafai, 2006; Kafai & Resnick, 1996; Pea, 1997; Vygostky, 1978). For video producers, these moments of social interactions are driven through the use of tools such as cameras and video editing software which can also extend human cognition (Stahl, Foot, & Nardi, 2006). Papert (1980) called these tools, such as a video camera or a computer, "objects to think with" arguing that physical tools help learners construct and revise connections between old and new knowledge.

I build on the field of New Media Literacies in recognizing that what makes new literacies "new" is not the use of technology, but the mindset of collaboration, participation and

distribution (Jocson, 2018, 2012; Lankshear & Knobel, 2006). New media is "shaped by but not reducible to technologies" (Jocson, 2018, p. 9). New technology has shifted the ways we read, write, communicate, and share our work and the new, contemporary mindset is one built on collaboration, participation, and distributive expertise (Jocson, 2018, p. 9). Korina Jocson (2018) proposes the term "new media literacies" to reflect literacies that are digital, interactive, hypertextual, virtual, networked, and simulated (p. 9). There are four key skills involved in new media literacy: the ability to communicate using multiple modes in particular contexts; the ability to use media technologies for new experiences; the ability to build on a mindset of collaboration, participation and distribution; and the ability to consume and evaluate media forms critically to challenge normalized discourses (Jocson, 2018, p. 10). These skills are essential for anyone participating in today's highly technological and global society.

Methods of Data Collection and Analysis

This dissertation is based on a year of observations in three video production classrooms in the Midwest of the United States. I conducted an instrumental, qualitative case study (Stake, 2000) in three educational sites which have a program specifically focused on video production for youth ages 14-18, grades 9-12. I chose these three sites because the educators, Amanda, Bruno, and Andy,[1] have been recognized for their innovative video production courses. As such, they do not necessarily reflect that which is typical, but that which is possible as we learn more about the phenomenon itself (Stake, 2000). This approach is helpful in re-envisioning classroom processes as we can begin building a base through modelling current practices from innovative practitioners.

[1] Throughout this dissertation, I use pseudonyms for names of all teachers, schools, and students.

I spent varying amounts of time in each of the three sites based on access to the sites and teacher's availability. I spent the longest amount of time in Amanda's classroom, working as a participant observer for one full semester in order to gain a comprehensive view of a video production classroom from the start to the end of a semester. I then spent the length of one full video production cycle in Bruno's class and two video production cycles in Andy's class. As I spent at least one full production cycle in each site, I was able to use this measurement of time to compare the three sites as all three sites had clear production stages including pre-production, production, and post production stages (Jocson, 2012).

Overview of Three Video Production Classrooms

All three educators in this study--Amanda, Bruno, and Andy--designed their classrooms to be flexible environments where students could collaborate and move freely around the school. They encouraged students to collaborate even when assigned individual video projects. Students could help one another film, serve as an actor, and help each other edit their videos. From assignment creation to the processes embedded into the classroom, Amanda, Bruno, and Andy designed for collaborative and distributed learning to take place. The collaborative design greatly influenced the extent to which students interacted and learned from one another. While the classroom practices and physical spaces may not be typical, they serve to demonstrate what is possible in the video production classroom. Table 1 details the names of the school, the course title, teacher, a brief course description, as well as a list of video assignments. I follow this table with a short description of the larger context of each site including details of the school, teacher, and courses.

Site	Course Title	Teacher	Course Description	Assignments
Bartell High School East	Digital Journalism	Amanda	Elective English course for juniors and seniors at a public high school in a large suburb. Course focuses on digital journalism.	"Letters to the next President" Video Announcements "Brief But Spectacular" "This is my life"
Horizons Arts Charter School	Cinematic Language	Bruno	Introduction to video production and cinema for students in grades 9-12 in a public charter school.	Video Diaries Remake Video "Tell it in Images"/ 3 Shot Film
Jefferson Community School	Video Production	Andy	Quarter long, elective course at a small, project based community school with just over 100 students in grades 9-12.	"Lumiere Brothers" Silent Film 5 Shot Film

Table 1. Description of three classrooms and video assignments

Site 1: Amanda's Digital Journalism Course

Amanda's Digital Journalism course was an elective English course for juniors and seniors at Bartell High School, a public high school in a large suburb. When Amanda started teaching the Digital Journalism course, it rarely had enough students enrolled for the class to continue. However, through the creation of the Weekly Video Announcements, Amanda now has two sections of this course with a waitlist each semester. While the video announcements included a combination of school announcements such as the reading of upcoming school events and a lunch menu, the real focus was on the student created weekly segments which resembled a mixture of popular YouTube sensations (anything from Unpacking videos to pranks) and Saturday Night Live skits. At the start of the semester, students worked in groups to come up with a segment theme and create the opening video for their titled segment all meant to influence and comment on school culture. Titles ranged from the "After-School Adventures" which

featured students who did adventurous and courageous after school activities not found in school to the “Nerdy Genius” which explored issues high school students face with witty advice from a Nerdy Genius. Each couple of weeks, each group of students would submit their video segments to Amanda, their teacher and producer, to hopefully have their piece featured in the video announcements. For the rest of the semester, Amanda’s students worked in groups of 3-5 to create three in-depth journalistic pieces and weekly video announcements. Although students worked in small groups for their segments, all videos were compiled with the reading of school announcements into one larger video that was disseminated across the school and shown during homeroom once a week.

Amanda’s students were regularly recognized both locally and nationally for their video journalism. Amanda put much effort in transferring ownership of the course into the hands of the students as she believed that interest based and project based assignments were essential for learning. She hoped for students to take ownership of the class and allowed the class to shift based on what her students brought with them each semester. She gave students much autonomy and trust in how they managed their time and the topics they chose to pursue.

Site 2: Bruno’s Cinematic Language Course

Bruno is an educator, an actor, and a playwright who works at Horizon Arts Charter School, a project based public charter school that focuses on artistic production and presentation. The mission of the school, to “empower people to think critically, engage creatively, and establish strong human connection in order to cultivate the next generation of changemakers” comes through in each of the classrooms which champion collaboration. At Horizon Arts, students are taught how to talk to one another about their work and participate in purposeful discourse using Harvard’s Visible Thinking--routines meant to guide student thinking structure

classroom discourse (Visible Thinking, n.d.). As a result, students are extremely comfortable working together, talking to one another, challenging one another's ideas, and asking their peers for feedback. Like all of the educators at Horizon Arts, Bruno regularly integrated the thinking routines and collaboration into his classroom practices.

Bruno teaches English, film, and drama. His Cinematic Language Course serves as an introduction to filmmaking. Upon entering, students have a variety of experience levels with video, some even taking Bruno's course for a second time. The course serves as an introduction to film creation with an emphasis on creative production. Students regularly critique outside films and their peers' films to improve their practice and engage in improv to work on their acting skills. Throughout the semester, students create both collaborative and individual creative movies and documentaries. Even when students are tasked with editing and producing their own films, they are encouraged to collaborate with their peers. Bruno's classroom was inline with the school's mission in this way.

Site 3: Andy's Video Production Course

Andy is an educator and a game designer. He teaches a wide variety of classes from the history of film to bike mechanics. Andy's class, Video Production, is a quarter long, elective course at Jefferson Community School. Jefferson Community School is a small, project based public charter school with just over 100 students in grades 9-12. With a focus on democratic learning, peer learning and peer feedback is the ethos of the school's culture. Students are regularly required to talk with their peers about their work and peer feedback is an element of most assignments, no matter the subject area. Students in this course ranged from seniors to freshmen and students had varied levels of skills, but most seemed to have previous video editing skills even if just a little bit.

Andy's course serves as an introduction to video production including the essentials of video production including story creation, acting, shooting, editing, and learning and using discourse language such as language surrounding shots, angles, etc. The course started with an introduction to the early black and white films, following chronologically almost as the students' film productions follow the timeline of film itself. Andy uses examples such as Charlie Chaplin movies and has students add the old time effect to their videos to mimic this older style.

Andy's students can move autonomously throughout the school to film during class time. Much like many studio-based environments (Hetland, Winner, Veenema, & Sheridan, 2013), Andy uses a variety of instructional techniques from mini-lectures to studio time and students all worked at their own pace. As students come to the class with a variety of background experience, Andy hopes to create an environment where students can learn from one another. He described the class as a "mixed age classroom kinda thing where you have different people: those that have a lot of experience and those that are just kinda gaining experience and having them in the same space at the same time" (interview, May 14, 2019). Two students who had previously taken Video Production served as peer mentors throughout the semester. As mentors, their main role was to provide feedback to their peers throughout the production process.

Data Collection Methods

For each site, I chose two to four focal videos based on the following criteria: access to multiple versions of the video in process; access to storyboards and post video reflections; and access to video or audio recording of critique sessions. Table 2 is a list of focal videos for each site, a brief synopsis of each video, and the accompanying data sources.

Site	Focus Videos	Video Synopsis	Data Sources
Amanda's Digital Journalism Course	"This Is My Life"	Journalistic profile on a student who speaks on the importance of being comfortable with oneself and not caring about what others think about you.	Rough cut of video (1) Field notes of small group conversations (3) Final video (1)
	"Treat of The Week"	Weekly video segment that featured snacks that could be found in the cafeteria or vending machines. Each week students held a challenge or dare with a treat from the cafeteria.	Field notes of small group conversations (11) Final videos (3)
Bruno's Cinematic Language Course	"Anxiety"	Silent film about a character who struggles with social anxiety and has difficulty leaving their apartment.	Rough cut of video (1) Field notes of small group conversations (2) Video of critique session (1) Final video (1) Interviews with students (2)
	"Urban Legends"	Action film about a band of super heroes who join forces to confront a villain in a staged battle.	Rough cut of video (1) Video of critique session (1) Final video (1)
	"Silent Anger"	Three shot silent film showing the progression of a character going from being at ease and turning angry after a discussion with a friend.	Rough cut of video (1) Video of critique session (1) Final video (1)
Andy's Video Production Course	"Trapped"	Short silent film about a character who gets trapped in a restroom for a hundred years, tries to escape, and eventually dies and turns into dust.	Audio recording of pitch critique session (1) Rough cut of video (1) Rubrics from rough cut feedback session (2) Final video (1) Final producer reflection (1)
	"Living A Lie"	Silent film that follows a character who lives through her camera rather than experiencing life herself.	Rough cut of video (1) Field Notes from informal critique sessions (3) Rubrics from rough cut feedback session (1) Final video (1) Final producer reflection (1)
	"Escape The School"	Comic film about a phantom who lives in the school ceiling and captures truant students.	Audio recording of pitch critique session (1) Rough cut of video (1) Rubrics from rough cut feedback session (1) Final video (1) Final producer reflection (1)

	"Showdown"	Silent action film about a young kid who is bullied in school by a "big scary guy." The film involves a second character who approaches to help, eventually beats up the bully, and returns stolen lunch money back to the kid.	Video recording of filming (1) Final video (1) Rubrics from rough cut feedback session (1) Final producer reflection (1)

Table 2. Focal videos organized by classroom and data collected

Through a year of data collection, I composed ethnographic field notes, collected artifacts, and conducted semi-structured interviews. Each data source was used for a variety of analytical purposes.

Observations and Field Notes

I composed ethnographic field notes of whole class discussions and small group conversations throughout my time at all three sites. When possible, I video and audio recorded critique and feedback sessions as critique can serve as evidence of learning in digital video production (Soep, 2006). Having audio and video recorded critique sessions allowed me to understand the discourse moves students take while discussing work with their peers.

Observations and field notes also helped me to place the assignments in context, to understand each teacher's pedagogical practices, and to establish how each teacher promoted collaboration and used assessments in their classrooms. As my focus in each classroom remained two to four focal groups, I also took regular field notes of their daily tasks, their conversations, and their interactions. The detailed ethnographic field notes provided necessary data to understand how collaboration functioned in each of the classrooms.

Interviews

I conducted semi-structured interviews with young video producers and teachers as interviews can create access to a deeper understanding of people's behaviors as participants describe experiences in their own terms (Seidman, 1998; Rubin & Rubin, 1995). I used semi-

structured to create a mutual discovery process and allow for a more organic nature for conversation (Creswell, 2013).

I conducted interviews with three young video producers after they completed and shared their final video productions with their peers. The timing ensured that they could reflect on the production process as a whole and speak to their critique experiences and how these may or may not have influenced their revision process.

I regularly conversed with the three educators about their practices, their assignments, and their educational philosophy and completed semi-structured interviews with all three educators. During the iterative composing process, I remained in contact with all three educators asking follow up questions and seeking additional information to continually triangulate data.

Artifact Collection

I collected artifacts at all three sites in order to fully understand the critique process, collaborative learning, and the function of assessments such as:

- Assignment sheets
- Storyboards and pre-planning documents
- Peer review sheets
- Rubrics, post-production reflections
- Slideshows describing assessment practices
- Rough and final cuts of video

The variety of data sources allowed for me to look throughout artifacts, interview responses, critique conversations, and field notes from collaborative discussions, tracing the narrative of the production process noting where ideas originated, how they came into fruition, and the skills students employed throughout this process.

Methods of Data Analysis

I used a variety of analysis methods throughout the three articles. For Chapter 2, I used descriptive coding and conversation analysis, to analyze the content of critique sessions. For Chapter 3 I used deductive and process coding to analyze moments of collaboration, tracing the collaborative actions and roles students played throughout video production. In Chapter 4, I used bidirectional artifact analysis (Halverson & Magnifico, 2013), to trace the skills students employed throughout the video production process.

Overview of Chapters

Each of the chapters of this dissertation examine a different affordance of video production in the classroom. Chapter 2 demonstrates that the collaborative process of video production and critique can serve as a bridge in merging out of school learning strategies with academic pursuits. Chapter 3 illustrates that video production because of its numerous working components, lends itself to authentic collaborative learning. Chapter 4 investigates the discrepancies between the affordances of video production for student learning and the assessments used to evaluate video production. Taken together, this dissertation demonstrates how video production may be integrated into the formal classroom environment to bring the kind of purposeful, collaborative new media learning often found online and in out of school spaces into the formal classroom environment. Table 3 provides an overview of each of the three content chapters.

	Chapter 2: Merging Out of School Learning Strategies with Academic Pursuits: Video Production and Participatory Cultures	Chapter 3: “Boom! Now we know how to do it”: Video Production for Authentic Collaborative Experiences	Chapter 4: Producer’s Commentary: An Assessment for New Media Literacies

Research Questions	What classroom practices are currently used to guide young composers through critique? How do youth navigate the digital critique process?	What models do educators use to promote collaborative video production? What does collaborative video production afford learners?	What do youth learn through the video production process? How do educators assess video production?
Theoretical Foundations	Participatory Cultures (Jenkins et al., 2007) New Media Literacy (Jocson, 2018, 2012; Lankshear & Knobel, 2006) Constructionism (Papert, 1980; Kafai, 2006)	Sociocultural theories of learning (Vygotksy, 1978; Pea, 1997) Learning ecologies (Caldwell, Bilandzic, & Foth, 2012) Knowledge-building process (Scardamalia & Bereiter, 2006)	Sociocultural theories of learning (Vygotksy, 1978; Pea, 1997) New Media Literacies (Jocson, 2018) Problem-exploring (Wardle & Rozen, 2012)
Analysis Methods	Descriptive coding Conversation Analysis	Descriptive, deductive, and process coding Artifact analysis Matrix display (Miles, Huberman, & Saldana, 2014)	Bidirectional artifact analysis (Halverson & Magnifico, 2013) Descriptive coding Two-variable case-ordered matrix (Miles, Huberman, & Saldana, 2014)
Major Findings or Implications	Critique can serve as a bridge in merging out of school learning strategies with academic pursuits. Educators can teach the discourse skills of argumentation and inquiry to help	Authentic video collaboration is built through a larger learning ecology created through people, place, technologies, and activities. Collaboration can be heightened through video production.	The skills learned in video production can more fully be realized multimodally. The producer's commentary serves as a multimodal assessment providing space for reflection of process and content creation

	students navigate these prime moments of learning.		mimicking a genre found in the film industry.

Table 3. Overview of three content chapters

Chapter 2

In Chapter 2, "Merging Out of School Learning Strategies with Academic Pursuits: Video Production and Participatory Cultures" I demonstrate that during the process of critique--an integral moment in video production--young video producers often steer their peers through discourse beyond teacher requirements and take control of their learning using argumentation, inquiry, and transference processes found organically in participatory cultures. Using descriptive coding and conversation analysis, I analyzed seven critique sessions and found that youth engaged in four distinct discourse moves at specific stages while navigating critique:

1. They use argumentation strategies in order to co-create meaning;
2. They use multiple methods of inquiry and questioning;
3. They critically evaluate feedback;
4. They synthesize their ideas and those of their peers to achieve their intended artistic vision.

The practices youth engaged in during critique mirrored many of the practices found in participatory cultures (Jenkins et al., 2007). I argue that collaborative process of video production and critique can serve as a bridge in merging out of school learning strategies with academic pursuits. To this end, I propose that classroom teachers focus on the teaching of discourse skills of argumentation and inquiry as a means to help students navigate these prime moments of learning.

Chapter 3

In Chapter 3, "'Boom! Now we know how to do it': Video Production for Authentic Collaborative Experiences" I argue that understanding the phenomenon of collaboration requires an ecological approach encompassing people, place, technologies, and activities (Caldwell, Bilandzic, & Foth, 2012). Therefore, I provide a comprehensive look at three video production classrooms examining the context of the classroom, the teacher's philosophy on collaboration, and the models they use for collaboration. I describe the three different collaborative models used in the classrooms and conclude that video production, because of its numerous working components, lends itself to authentic collaborative production. Specifically, I demonstrate that collaborative video production affords learners the ability to:

- Participate in collaborative problem solving for a shared purpose;
- Expand their understanding and stretch their mind through using new tools;
- Navigate group dynamics and work as a team;
- Learn from peers of various ability levels who have a shared language and understanding.

Using deductive and process coding to analyze moments of collaboration, I traced the collaborative actions and roles students played throughout production and traced individual students' roles throughout production noting where their roles shifted or remained constant. Through a broad analysis of each teacher's collaborative assignments, philosophy of collaboration, and classroom practices, I describe the affordances of three different collaborative video productions models and demonstrate that in each instance, the possibilities of collaboration were part of a much larger collaborative ecology both in the classrooms themselves and also part of a larger, collegial community found at the school level. This is an important recognition for educators and teacher educators in thinking about designing for collaborative learning. While

taking this broad approach may make designing authentic collaboration opportunities feel daunting, I hope instead that it demonstrates that collaboration is not something that simply takes place through group work. It is instead built on a comprehensive approach to educational design and then built into individual moments of collaboration. These moments, I argue, can be heightened through video production.

Chapter 4

Chapter 4, "Producer's Commentary: An Assessment for New Media Literacies" I demonstrate the discrepancies between the affordances of video production for student learning and the assessments used to evaluate video production. Using bidirectional artifact analysis (Halverson & Magnifico, 2013), I traced the narrative of the production process noting the skills students employed throughout this process and found that students build on a variety of new media skills throughout video production. I compared the new media literacy skills to the content of the assessments and found and found the need for an assessment that allows students to reflect on their process and demonstrate how they engaged with new media literacies. I argue that the decoupling of practice and assessment may be caused by the fact that the assessments used to evaluate new media literacies are not themselves reflective of the capabilities of new media. I argue that the skills learned in video production cannot be completely reflected through a single mode, but can more fully be realized through using the same modes of expression used to create their video. I present the producer's commentary as an assessment that asks students to analyze shots, share early versions of the film and behind the scenes footage providing space for reflection of process and content creation in an authentic assessment mimicking a genre found in the film industry.

Contributions to the Field

Significant research in the last decade has explored how technologies and new media has influenced education both in and out of schools. Since Jenkin et al.'s (2007) now canonical text "Confronting the Challenges of Participatory Culture: Media Education for the 21st Century" provided a framing for understanding the affordances of new media learning online and out of school through affinity spaces, scholars have explored the possibility of leveraging these same affordances in new environments finding it difficult to adapt a participatory culture framework into a formal classroom setting for numerous issues: formal education is conservative rather than experimental; static rather than innovative; remains unchanged rather than adaptive; and is bureaucratic rather than ad hoc and localized (Jenkins et al., 2007). Halverson (2012) proposed that it is possible, however, to design for a similar culture. She proposed the idea of "participatory media spaces" as a framework for designing learning environments toward that end. She argues the principles of design necessary for participatory media spaces include a structured learning environment that engages in conceiving, representing, and sharing of digital art; assessment that is embedded into process and product; and technology that is integrated throughout the conceiving, representing, and sharing process. Halverson's (2012) framework is ideal for youth media arts organizations, learning environments that rest somewhere in between video games and classrooms. However, similar to Jenkin's participatory cultures, is difficult to apply "participatory media spaces" to the classroom environment.

This dissertation rests in the intersection of the work of Jenkins et al (2007) and Halverson (2012) in offering a means for classroom educators to harness the same affordances of participatory cultures in the formal classroom environment. After all, not all youth have the ability to participate in out of school and online practices. Those youth who have the ability to

partake in out of school opportunities and are introduced to advanced uses of technology benefit from the type of learning offered through new media, while those students from non-dominant communities who rely on school opportunities are not always provided the same advantages. My research shows that video production affords many of the same opportunities, suggesting that educators can leverage the affordances of participatory cultures in their classroom through video production.

Chapter 2: Merging Out of School Learning Strategies with Academic Pursuits: Video Production and Participatory Cultures

When youth hang out with their friends online or outside of school they are motivated by something much stronger than what they are presented with in school: a chance to explore and learn about something they care about with people from around the world. These learning environments, which Jenkins et al. (2007) coined "participatory cultures" are successful in promoting peer supported learning as members are motivated by the opportunity for communication and collaboration (Fields, Magnifico, Lammers, & Curwood, 2014). Peers provide feedback, share work, ask questions, and offer one another mentoring as they feel that their contributions matter (Jenkins et al., 2007). While most academic settings do not capitalize on inherent participatory learning strategies, educators can use video production as a conduit to the rich learning structure available through participatory cultures thereby merging out of school learning strategies with academic pursuits.

Video production has become increasingly popular in the literacy classroom as educators have made the shift to digital composing. The transition from essays to video makes sense. Video genres mirror the assignments traditionally assigned in literacy classrooms as they can take the form of narrative, creative writing, argument, instructions, and even a textual analysis. Video offers young people the opportunity to engage in new media learning. Through video production, young people can quickly transition from digital media consumer to media producer. Video production requires relatively low barriers for youth to get started. They are already embedded into numerous participatory cultures set up for this purpose: they watch their peers' videos on YouTube; they post their own videos on Snapchat; and they learn about video

production from online tutorials. Take for example Marla, a 14 year old novice photographer[2]. During studio time at Marla's after school program, she started passively exploring her peers' videos posted on the program's YouTube channel. She subscribed to the channel, started commenting on peers' videos, and found a video that inspired her to create her own interview video emulating the style of her peers. She solicited a partner and they composed survey questions and interviewed members of the after school program. Unsure how to edit the video pieces together, Marla searched through online tutorials and other YouTube videos. After editing, she posted the video to the program's YouTube channel and her Facebook page where those same peers who were interviewed began commenting on her work closing the participatory culture feedback loop.

Marla's story is not wholly unique; young people are constantly engaged in similar collaborative production processes. Through sharing, commenting, "liking" and reviewing online content, young composers like Marla begin to see themselves as part of a community of video producers. Video production--a highly collaborative and participatory act--allows composers to rapidly share ideas, express emotions, and advance understandings. Video allows even novice composers to become artists. Through the process of filming, remixing, editing, directing, and acting, young composers can begin to take on the identity of a media producer.

This article examines critique in three video production classrooms and demonstrates the purposeful discourse moves taking place throughout the critique process. My research supports that during the process of critique--an integral moment in video production--young video producers often steer their peers through discourse beyond teacher requirements and take control of their learning using argumentation, inquiry, and transference processes found organically in

[2] This vignette is based loosely on observations during a two week video production summer camp in an out of school education site.

participatory cultures. Furthermore, composers use different strategies depending on when critique takes place in the large production process.

To investigate the peer supported practices of video production, I asked two questions:

- What classroom practices are currently used to guide young composers through critique?
- How do youth navigate the digital critique process?

Literature Review

Participatory Cultures

Participatory cultures have been recognized as ideal learning environments as they offer low barriers to artistic expression; support for creating and sharing work; informal mentorship; social connection; and provide a feeling that one's contributions matter (Gee, 2004; Jenkins et al., 2007). Participatory cultures are beneficial for peer-to-peer learning, the diversification of cultural expression, the development of workplace skills, and help youth develop new literacy social skills (Jenkins et al., 2007). As youth transition from media consumers to media producers, participatory cultures often serve as an organic, collaborative, and supportive environment where youth voluntarily participate in critique and engage in problem solving techniques to improve their work (Magnifico, Curwood, & Lammers, 2015; Magnifico, 2010; Black, 2005; Beach & Friedrich, 2006; Beason, 1993).

It is difficult for formal learning environments to adapt a participatory culture framework for numerous issues: formal education is conservative rather than experimental; static rather than innovative; remains unchanged rather than adaptive; and is bureaucratic rather than ad hoc and localized (Jenkins et al., 2007). While it is certainly difficult to translate a participatory culture

framework into a classroom and create the kind of voluntary collaboration that regularly takes place in communities such as YouTube, it is possible to design for a similar culture. Halverson (2012) proposed the notion of "participatory media spaces," an extension of participatory cultures, as a framework for designing learning environments toward that end. She argues the principles of design necessary for participatory media spaces include a structured learning environment that engages in conceiving, representing, and sharing of digital art; assessment that is embedded into process and product; and technology that is integrated throughout the conceiving, representing, and sharing process. Halverson's (2012) framework is ideal for youth media arts organizations, learning environments that rest somewhere in between video games and classrooms. However, similar to Jenkin's participatory cultures, is difficult to apply "participatory media spaces" to the classroom environment. Therefore, my work builds on the ideas of Jenkins and Halverson in offering a means for classroom educators to harness the same potential.

New Media Literacy

Many composition instructors have incorporated new media literacies into their classroom as a means to re-envision assignments turning memoirs into podcasts, transforming argumentative essays into documentaries, and have perhaps even considered recognizing Wikipedia as a legitimate source. However, most scholars today agree that what makes new literacies new is not the use of technology, but the mindset of collaboration, participation and distribution (Jocson, 2018, 2012; Lankshear & Knobel, 2006). Indeed, new media is "shaped by but not reducible to technologies" (Jocson, 2018, p. 9). Jocson (2018) argues that there are four elements of new media literacy: the ability to communicate using multiple modes in particular contexts; the ability to use media technologies for new experiences; the ability to build on a

mindset of collaboration, participation and distribution; and the ability to consume and evaluate media forms critically to challenge normalized discourses.

As new media assignments have become a norm in literacy classrooms, new media literacy is often incorporated in a hierarchical manner where the focus on using technology takes precedence over designing for purposeful co-production. When this happens, collaboration is often integrated in an additive or accidental manner rather than recognized as a driving element of new media learning. This hierarchical approach is counterintuitive as collaboration and distribution of knowledge are the core ways in which learning takes place in new media production. When collaboration is incorporated as an addition and not the driving force in planning new media assignments, students miss out on rich learning opportunities.

Critique

Composition learning is an inherently social act (Brandt & Clinton, 2002; Brandt, 1990). Every time a composer sits down to compose, they enter into dialogue with that which has come before while simultaneously creating new meaning when their text meets the eyes and ears of a new audience. In the composition classroom, this process takes place while students talk to their peers, their mentors, and their teachers about their work. Learning occurs with these social acts of sharing ideas, approaching challenges, and collaboratively problem solving (Pea, 1997). In the composition classroom, this act is heightened during the peer critique process. As students' ideas are put in contrast with their peers and they consider alternative viewpoints, students co-create knowledge. In this way, students become co-dependent on one another's ideas, efforts, suggestions, and criticisms (Bohemia & Ghassan, 2012).

However, simply placing students in groups does not ensure rich learning experiences will occur (Garcia et al., 2014). Certain features must be present for the distribution of

knowledge to take place and educators must intentionally design for these learning experiences. Educators facilitate collaborative learning through creating purposeful lesson plans that heighten these experiences: they foster a community of mutual respect and sharing and they provide scaffolding and support in navigating this process (Brown et al., 1997). When students gain the ability to navigate this process successfully, they have the ability to take control of their learning.

One way that literacy educators design for distributed learning is through the use of critique. Critique is a highly effective social learning process as composers not only gain feedback from peers and mentors, but they learn how to better define their vision through defending their work and their rhetorical decisions. They participate in collective dialogue that advances their own learning. Specifically, young video producers in this study used argumentation and inquiry practices to drive the critique process. Although "argumentation" may presume a negative interaction, most rhetoricians recognize argumentation as the prime mode for moving thinking forward (Lunsford, Ruszkiewicz, & Walters, 2012). Similarly, I build on Lynch, George, and Cooper's (1997) recognition of argumentation as "a multifaceted process that includes moments of conflict and agonistic positioning as well as moments of understanding and communication...a process in which people struggle over interpretations together, deliberate on the nature of the issues that face them, and articulate and rearticulate their positions in history, culture, and circumstance" (p. 63). While Lynch, George, and Cooper (1997) claim that argumentation is synonymous with "agonistic inquiry" or "confrontational cooperation" Hillocks (1982) separates the two discourse moves in recognizing inquiry as "a consciously adopted procedure used to investigate phenomena in various unrelated disciplines" (p. 662). Hillocks found that scholars throughout history and across disciplines--from Aristotle to biologist John Paul Scott--described inquiry as involving five similar stages: observation, description,

comparison and contrast, generalizations, and testing generalizations against further data. I argue that we must help students perfect the discourse necessary to engage in dialogue that moves thinking forward--argumentation and inquiry--so they may take advantage of this rich learning opportunity.

Because peers share the same problems, knowledge and language, they are more effective than experts in detecting and diagnosing problems from their own perspectives and generating purposeful solutions (Cho & MacArthur, 2006). However, critique is not an innate skill. It must be taught. Ball (2012) suggests we must demystify the process, teaching the genre itself. While current methods of critique used in the classroom--peer review, writer's workshop, and studio-based approaches--have been found to improve students' writing and help students gain an understanding of the expectations of academic writing (Loretto, DeMartino, & Godley, 2016), when youth take part in critique in participatory cultures, they often engage in voluntary, purposeful critique, devising their own strategies (Soep, 2005). By capitalizing on the productive, collaborative strategies of participatory cultures, educators can adapt their current critique practices.

Critique Practices Currently Used in Classrooms

Peer Review

Peer review, the most common model for peer feedback used in the Language Arts classroom, most often involves students bringing in a rough draft to exchange with one or two peers. Reviews are most often led with a teacher created peer review sheet or rubric. This approach has been found to limit students' feedback as youth take note of this pattern and the prescriptive peer review rubrics become rules to follow (Kline, 2015) and some students use the same language from the rubric in their writing (Magnifico, 2010; Olmanson et. al., 2016).

However, when teachers involve students in creating peer review criteria or involve more active methods for peer review, these same tasks tend to have a positive impact on student writing (Ball, 2012; Loretto et al, 2016; Olmanson, 2016). When educators incorporate methods that focus on ideas rather than sentence level errors; when the process incorporates students' awareness of audience; and when students develop awareness and regulation of their own writing process, peer review is more effective (Loretto et al., 2016).

Writer's Workshop

Writer's workshop, a core practice in college level creative writing programs, allows writers to take on the identity of a writer by exploring their tastes and preferences and learning how to participate in critique (Stukenberg, 2017). Workshops are set up as communities of practicing writers, often led by an experienced writer or teacher where the teacher is not an authority, but a "co-explorer" (Stukenberg, 2017). Participants usually read their peers' work prior to the workshop and then as a collaborative group discuss each piece together. Although the writer's workshop requires time spent out of class reading and responding to numerous peers' texts, the method is highly social and reflects the collaborative, social nature of new media literacies.

The Studio Model

Growing interest in digital production, art-based education, and maker education has inspired researchers to examine the pedagogical practices of the studio space. Critique is woven into the cyclical, iterative process of the studio based model as teachers regularly encourage students to reflect on their work through various stages of production (from sketches to final products) (Hetland, Winner, Veenema, & Sheridan, 2013).

Intersection of Peer Review, Writer's Workshop, and the Studio Model

I build on the models of peer review, writer's workshop, and the studio model as a starting point to name the iterative critique process taking place through new media production. There are numerous overlapping outcomes of peer review, writer's workshop, and the studio model such as the focus on social interaction, process over product, reflection, as well as the promotion of audience awareness and personal growth. However, the distinct differences remain that the goals of the writer's workshop and the studio model include teaching skills of the profession, promoting creativity, and teaching disciplinary literacies, where peer review is most often centered on teaching practical, effective communication for a larger, general audience (see Figure 1).

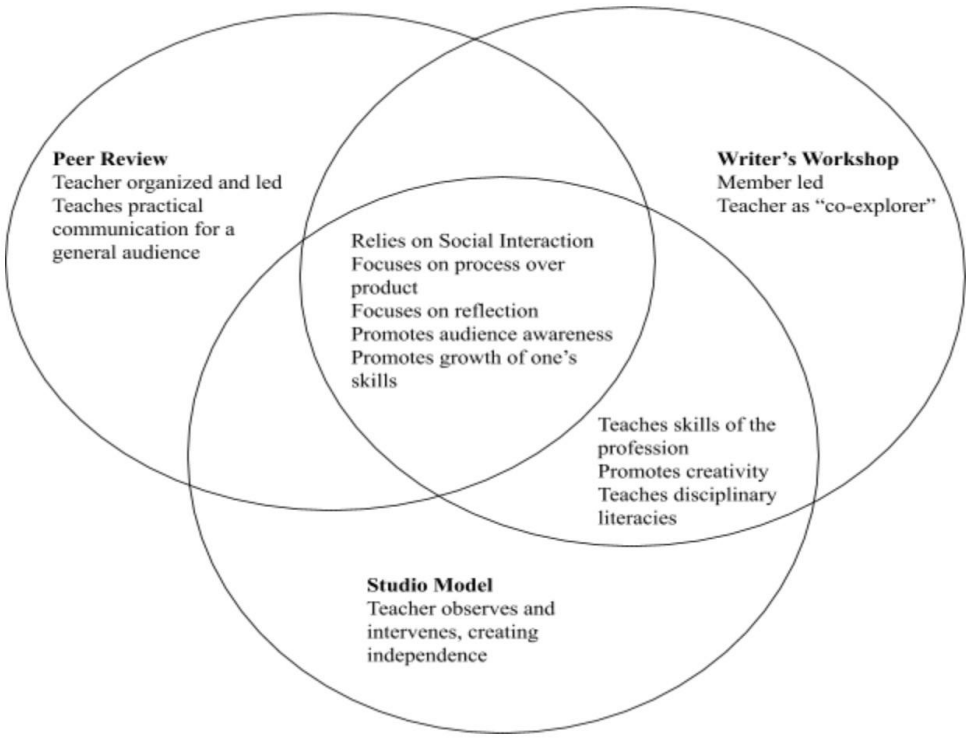

Figure 1: A comparison of peer review, writer's workshop, and the studio model.

I propose that digital critique practices encompass several of the attributes found in these competing models, exclude others, and some are wholly unique to this field. Overlapping the writer's workshop and the studio model becomes essential to understanding digital critique

processes, as the focus on disciplinary knowledge is often lost in peer review sessions. Educators who are not necessarily trained in studio "habits of mind" and utilize traditional peer review practices with digital assignments may miss important opportunities to promote creativity. Through converging these three models, we open up the possibility of an organic critique practice that inspires creativity, teaches rhetorically effective communication skills, and offers youth the chance to practice disciplinary literacies. The technology needed for creative, digital production is readily available in many public schools. I open up the possibility that studio "habits of mind" may be acquired in traditional education settings and available for a wide population of learners.

Theoretical Framework

The video production classroom revolves around the process of turning one's ideas, knowledge, and skills into a digital representation, from the initial spark of an abstract idea to a storyboard, pitch, rough cut, to the final video (Jocson, 2012; Bruce, 2009; Halverson & Gibbons, 2010). As composers transform their ideas into digital representations, they build connections between old and new knowledge developing new understandings (Kafai, 2006; Reisberg, 1987). The ability to transform complex ideas into a physical representation--in this case, a video--is a marker of disciplinary intelligence (Enyedy, 2005). Composers gain new knowledge not only through the construction of the representation, but through sharing and discussing their work with peers (Kafai & Resnick, 1996). Learning takes place during critique as composers are presented with new and sometimes conflicting perspectives and are challenged to think about their work in a new way. This is the core way in which learning occurs (Lave & Wenger, 1991). Each suggestion, feedback, question, and criticism creates an obstacle and

opportunity for growth. In the context of critique, learning to navigate discourse through purposeful use of language and rhetoric is necessary for advancing knowledge.

After all, discourse is never neutral but allows speakers to achieve a specific purpose and act upon the world (Gee, 2001). In the context of critique, language allows students the opportunity to do something, to build relationships between ideas, and to make some ideas significant and others less significant (Gee, 2014). Gee (2001) separates "discourses" from "Discourses" or communities of practice that have similar ways of using language, talking, listening, writing, and acting. In the literacy classroom, students are integrated into a new academic Discourse where they must adapt to new ways of talking, negotiation, and language use. While there are expected ways to use language during classroom critique, students may need support in learning the discourse moves involved in successful critique that takes place in academic settings.

Method

Site Selection

To understand how critique functions in youth video production, I conducted an instrumental, qualitative case study (Stake, 2000) in three educational sites which have a program specifically focused on digital media production for youth ages 14-18, grades 9-12. I selected these three sites in order to understand the complex moves students currently take through the critique process (see Table 1). I chose these three sites because the three educators have been recognized for their innovative video production courses. As such, they do not necessarily reflect that which is typical, but that which is possible as we learn more about the phenomenon itself (Stake, 2000). This approach is helpful in re-envisioning classroom processes

as we can begin building a base through modelling current practices from innovative practitioners.

Site	Course Title	Course Description	Teacher
Bartell High School East	Digital Journalism	Elective English course for juniors and seniors at a public high school in a large suburb. Course focuses on digital journalism.	Amanda
Horizons Arts Charter School	Cinematic Language	Introduction to video production and cinema for students in grades 9-12 in a public charter school.	Bruno
Jefferson Community School	Video Production	Quarter long, elective course at a small, project based community school with just over 100 students in grades 9-12.	Andy

Table 1: Research Sites

Data Collection

I worked as a participant observer in three video production classrooms for the length of two video production cycles. The length of the cycles varied from site to site, but all three sites had clear production stages including pre-production, production, and post production stages (Jocson, 2012). I chose 1-3 focal videos per site based on the following criteria: access to multiple versions of the video in process; access to storyboards and post video reflections; and access to video or audio recording of critique sessions. As the educators in all three sites assigned group and individual projects or encouraged collaboration throughout the production process, I focused not on focal students, but focal collaborative videos.

Throughout data collection, I conducted regular whole group and small group observations. I worked as a participant observer throughout the production process as youth proposed ideas for their videos, storyboarded their projects, shot video, edited their projects, participated in critique, and revised and viewed their final product. I composed ethnographic

field notes and video and audio recorded critique sessions for the focus projects. I conducted semi-structured interviews with youth participants to understand how youth experienced the critique process and used feedback in their final productions. Finally, I collected artifacts throughout production including storyboards or brainstorms, pitch sheets, peer review sheets/ rubrics, assignment sheets, post production reflections, as well as the rough and final cuts of videos.

Site	**Focus Videos**	**Video Synopsis**	**Critique Method**	**Timing of Critique**	**Artifacts**
Bartell High School East	"This Is My Life"	Journalistic profile on a student who speaks on the importance of being comfortable with oneself and not caring about what others think about you.	Informal critique within production group	Production Stage	Rough cut of video Field notes from informal critique session Final video
Horizons Arts Charter School	"Anxiety"	Silent film about a character who struggles with social anxiety and has difficulty leaving their apartment.	Fishbowl Critique Session	Production Stage	Rough cut of video Video of critique session Final video Interviews with students
Horizons Arts Charter School	"Urban Legends"	Action film about a band of super heroes who join forces confront a villain in a staged battle.	Fishbowl Critique Session	Production Stage	Rough cut of video Video of critique session Final video
Horizons Arts Charter School	"Silent Anger"	Three shot silent film showing the progression of a character going from being at ease and turning angry after a discussion with a friend.	Three person peer review using "See, Think, Wonder" routine	Production Stage	Rough cut of video Video of critique session Final video
Jefferson Community School	"Trapped"	Short silent film about a character who gets trapped in a restroom for a hundred years, tries to escape, and eventually dies and turns into dust.	Pitch Critique with Peer Mentor Critique of rough cut using rubric	Pre-production Stage Production Stage	Audio recording of pitch critique session Rough cut of video Rubrics from rough cut feedback session Final video Final producer reflection

Jefferson Community School	"Living A Lie"	Silent film that follows a character who lives through her camera rather than experiencing life herself.	Informal critique with Peer Mentor Critique of rough cut using rubric	Production Stage Production Stage	Rough cut of video Field Notes from informal critique sessions Rubrics from rough cut feedback session Final video Final producer reflection
Jefferson Community School	"Escape The School"	Comic film about a phantom who lives in the school ceiling and captures truant students.	Pitch Critique with Peer Mentor Critique of rough cut using rubric	Pre-production Stage Production Stage	Audio recording of pitch critique session Rough cut of video Rubrics from rough cut feedback session Final video Final producer reflection

Table 2. Focal Videos

Data Analysis

To answer my research question, what classroom practices are currently used to guide young composers through critique, I used descriptive coding to analyze field notes, instructional practices and min-lectures, and teacher designed peer review sheets and critique documents. I coded these to determine when critique took place, the types of critique that took place, and the various methods used to teach critique practices.

To understand how youth navigate the digital critique process, I used descriptive coding and conversation analysis. First, I analyzed critique sessions breaking up discourse into stanzas, organizing groups of idea units (Gee, 2011). I broke each segment into units based on topic as well as pairs of feedback and response. When lines of conversation were broken by a new topic, I created a new unit for analysis. I coded each segment to determine the content of critique and the types of critique that took place. I then broke each unit up into adjacency pairs to determine between one utterance and the following utterance. I analyzed each stanza to determine the types of critique given and the discourse moves students took during critique.

I analyzed each unit of conversation to determine how composers and their peers used discourse to build knowledge through breaking down each moment to determine its function, or "building task" (Gee, 2014). Through closely examining conversation, I determined how students' conversations served as vehicles of production and what discourse allowed them to accomplish (Raclaw, 2005). In particular, I analyzed how peers responded to critique about their work and negotiated meaning in this process.

Initial Coding Categories	**Initial Descriptive Codes**
Navigating the critique process/ discourse moves	Using teacher created prompt/ questions Using their own strategies ● Argumentation strategies ● Inquiry and questioning ● Critical evaluation of feedback ○ Using feedback to define boundaries ○ Using feedback for transfer, application, and adaptation ● Synthesizing ideas
Feedback types	Offering new/ different suggestions Suggestions for changes Suggestions of additions Suggestions of subtraction (take something away) Critique of current state (saying something is wrong, but not offering suggestions) Compliments Asking clarifying questions Self-deprecation
Argumentative Strategies	Creating a claim Claim + reason Reason for claim Providing evidence of production plan Providing evidence of authority Restating production plan Arguing for weak production plan Considering options Weighing evidence of opposition Weighing logic of evidence Acknowledging opposition Offering alternative answer Self deprecation
Inquiry Strategies	Asking questions Exploring material

Table 3: Descriptive Code Scheme

Findings

To illustrate the discourse moves taking place through critique, this section is built into three sections. To answer the first research question, what classroom practices are currently used to guide young composers through critique, I detail the critique practices at three video production sites. To answer the second research question, how do youth navigate the digital critique process, I share the techniques and discourse moves students took during critique during the pre-production and production stages including argumentative and inquiry strategies and demonstrate how young composers evaluate feedback to define artistic boundaries and approach their work from a new perspective.

Overview of Three Video Production Classrooms

The educators in this study--Amanda, Bruno, and Andy--highly valued the critique process and embedded opportunities for peer feedback throughout the production process. They regularly led youth in critiquing outside texts and learning how to provide meaningful feedback through regular practice. They created a welcoming environment where youth felt safe sharing their work with one another because it became a normalized part of the process. While their classroom practices may not be typical, they serve to demonstrate what is possible in the video production classroom.

Bartell High School

Amanda's Digital Journalism course was an elective English course for juniors and seniors at Bartell High School, a public high school in a large suburb. Throughout the semester, Amanda's students worked in groups of 3-5 to create three in-depth journalistic pieces and weekly video announcements. Amanda's students were regularly recognized both locally and nationally for their video journalism. Amanda put much effort in transferring ownership of the course into the hands of the students as she believed that interest based and project based

assignments were essential for learning. She hoped for students to take ownership of the class and allowed the class to shift based on what her students brought with them each semester. She gave students much autonomy and trust in how they managed their time and the topics they chose to pursue.

Amanda introduced the idea of critique early in the semester through having students assess their own videos using a self-assessment rubric. The rubric focused on six concentrations: purpose & controlling idea; filming; research & evidence; visual interest & editing; sound; and continuity. For each concentration, students were asked to assess their work with a scale that included a numeric scoring of 4-1stars and grade of A-D (4 stars=A; 3 stars=B; 2 stars=C; 1 star=D). Students were also encouraged to provide comments for each concentration. Using this same rubric, Amanda ran formal critique sessions for students to pitch their video ideas for the first two videos having each group share their story ideas with the class who then filled out the rubric and provided vocal suggestions in front of the class. After these first two instances, the formal process dwindled and students participated in giving and receiving feedback more informally with their group members. Despite the fact that formal critique did not take place beyond the first assignments, students' informal feedback topics often followed the same topics as the originally assigned rubric.

Horizons Arts Charter School

Bruno's Cinematic Language course served as an introduction to video production and cinema for students in grades 9-12 in a public charter school in a small town. Throughout the semester, students created both collaborative and individual creative movies and documentaries. Critique and group work were built into both the philosophy of Horizons Arts Charter School and Bruno's teaching. At Horizon Arts, students are taught how to talk to one another about their

work and participate in purposeful discourse using Harvard's Visible Thinking--routines meant to guide student thinking structure classroom discourse (Visible Thinking, n.d.). As a result, students were extremely comfortable working together, talking to one another, challenging one another's ideas, and asking their peers for feedback. Like all of the educators at Horizon Arts, Bruno regularly integrated the thinking routines into his classroom practices and this included critique, which happened throughout the production process. During the two production processes I observed, students engaged in a variety of critique processes.

For the first film, "Three Shot Film" each student made a very short video consisting of three shots for narrative and one additional shot of them explaining they're decision making. After filming their initial shots, students worked in groups of three or four, shared their shots with their peers, and were asked to give at least two pieces of feedback per student using the protocol "See, Think, Wonder" (a routine that encourages careful observations by asking simply What do you see? What do you think about that? What does it make you wonder?"). During this process, students were asked to write down their peers' feedback so they could return to the written comments when they moved to revision. After the peer review session, students gathered in a circle at the front of the room and each student shared a piece of feedback they received that they planned to use for revision. Once students had a rough cut of their film, they watched each film as a class offering oral feedback based on Bruno's questions. As the purpose of this assignment was to learn how to use different types of shots to achieve particular visual effects, Bruno's questions were tied to filming choices. Finally, students created a director's commentary for their film where they described each type of shot they used and explained why they chose this shot to achieve their artistic vision.

For the collaborative film, the "Tell It In Images" film, students created a short film with no audio. Because of the collaborative nature of the film, the critique process varied greatly. While informal and group feedback occurred regularly, the formal critique process took place when students had a rough cut of their video through a fishbowl critique sessions. During these sessions, all students created two circles at the front of the room: one large circle and a smaller circle inside of the large circle. For each video, Bruno pulled four names of students who would give feedback. They were asked to sit in the smaller fishbowl circle, take notes on the video, and provide 5 minutes of uninterrupted feedback after watching the film twice. Regarding feedback, Bruno directed "You can structure notes however you want. We've talked a lot about how to give feedback so I trust you folks uh can organize that whether you do your see, think, wonder; warm feedback...however you want to jot notes for yourself just so you can contribute to that conversation in the middle." During the session, one seat in the fishbowl was left empty so that any student from the larger circle who wanted to give feedback could jump in at anytime to participate. The video producers were asked to sit outside of the circles, take notes, and remain silent until all feedback was given.

Jefferson Community School

Andy's class, Video Production, is a quarter long, elective course at Jefferson Community School. Jefferson Community School is a small, project based public charter school with just over 100 students in grades 9-12. With a focus on democratic learning, peer learning and peer feedback is the ethos of the school's culture. Students are regularly required to talk with their peers about their work and peer feedback is an element of most assignments, no matter the subject area. Beyond the core classes, students choose choice classes based on their interests.

The video production course is a popular course and not all students who apply to get in can be enrolled as enrollment is built on seniority.

This study took place in a quarter long course called Video Production taught by one of Jefferson School's part time educators, Andy. Students in this course ranged from seniors to freshmen and students had varied levels of skills, but most seemed to have previous video editing skills even if just a little bit. The course is meant to introduce students to the essentials of video production including story creation, acting, shooting, editing, and learning and using discourse language such as language surrounding shots, angles, etc. The course started with an introduction to the early black and white films, following chronologically almost as the students' film productions follow the timeline of film itself. Andy uses examples such as Charlie Chaplin movies and has students add the old time effect to their videos to mimic this older style.

Two students who had previously taken Video Production served as peer mentors throughout the quarter. As mentors, their main role was to provide feedback to their peers throughout the production process. While they provided feedback informally throughout the process, students participated in peer mentor critique during the pitch process and after completing a rough cut of their video. During the pitch session, students met with one peer mentor in a separate room and pitched their story idea using guided questions. The students pitching their story were to describe their story and then ask the peer mentor questions, writing down the answers as they moved forward. Once students had a rough cut of their video, they were to get two forms of feedback from the peer mentors. To do so, they used a teacher created rubric which covered four areas of concentration: Plot/ storyline, flow, characters/ roles, and intertitles. Peer mentors circled a score (5=strong; 3=average, 1=weak) and were tasked with providing comments in the corresponding "notes" section for each concentration.

Learning Through the Critique Discourse

Through analyzing young composer's critique practices in these three video production classrooms, I found that youth engaged in four distinct discourse moves at specific stages while navigating critique:

1. They use argumentation strategies in order to co-create meaning;
2. They use multiple methods of inquiry and questioning;
3. They critically evaluate feedback;
4. They synthesize their ideas and those of their peers to achieve their intended artistic vision.

Using Argumentative Strategies

Through critique sessions, young composers refined their argumentation skills to continually define their artistic vision. The dialogue that took place during critique was dialectic whereby the composer's ideas were pushed up against the counter ideas and suggestions of their peers. Most often, youth used argumentative methods using logical reasons and evidence to back up claims. Sometimes this evidence took the form of pointing to parts in the video that answered their peers' questions; other times, this took a more dialogic approach where the composer and reviewer worked collaboratively to ensure the creation of a logical, realistic film. Composers used argumentation techniques when determining what aspects of the film were essential or inessential to the film's message. Composers, in dialogue with their peers, had to argue for and share valid data to support their choices. Composers used argumentative strategies to demonstrate that they had the authority to complete their production plan. Most often they created claims and backed them up with reasons. They backed up their arguments with evidence in the form of a production plan and authority, acknowledged their opposition or alternative

viewpoints, weighed the possibilities, considered options, and offered alternative solutions (See Table 4).

		Argumentation Strategies													
Film	**Stage of production**	Creating a claim	Claim + reason	Reason for claim	Providing Evidence: Production Plan	Providing Evidence: Authority	Restating production plan	Arguing for weak production plan	Considering options	Weighing Evidence of Opposition	Weighing logic of evidence	Acknowledging Opposition	Offering alternative answer	Self deprecation	**Sum of Argument Strategies per film**
"This is my life"	Production Stage	1	3	3	0	2	0	0	1	0	1	1	0	1	13
"Anxiety"	Production Stage	1	6	2	0	0	0	0	0	0	2	5	6	0	22
"Urban Legends"	Production Stage	6	9	1	0	0	0	0	0	0	0	2	2	1	21
"Silent Anger"	Production Stage	0	1	0	0	0	0	0	1	0	0	1	0	1	4
	Pre-production Stage	0	0	2	4	1	0	4	2	0	4	0	2	2	21
"Trapped"	Production Stage	0	1	0	0	0	0	2	0	0	0	1	1	1	6
"Living A Lie"	Production Stage	3	0	1	0	0	0	0	0	0	0	0	0	0	4
"Escape the School"	Pre-production Stage	2	2	0	9	2	2	0	0	1	0	2	3	0	23
Sum of Argument Strategies Across Films		13	22	9	13	5	2	6	4	1	7	12	14	6	

Table 4. Argumentative strategies used throughout focal films during the pre-production and production stages. **Critique for the movies “Anxiety” and “Urban Legends” took place during a fishbowl exercise where the producers were charged with observing the critique and taking notes on their peers’ feedback. Therefore, producers did not take part in argumentation. However, the students charged with sitting in the fishbowl did use argumentation strategies in talking about the films.

Composers most often used argumentation strategies during critique sessions that took place early in the planning stage. This kind of argumentation often took place at Jefferson Community School where the pitch session served as a transition point (Halverson & Gibbons, 2010). Before students could begin filming, they had to pitch their story to one of the peer mentors, write down the feedback, thereby gaining approval to continue with their proposed idea. Andy, the teacher at Jefferson Community School, provided students and the peer mentor with a list of guiding questions. After students detailed their story line to the peer mentor they were tasked with asking the peer mentor five questions to spark dialogue:

1. Is the storyline clear? If no, what is unclear? If yes, ask them to repeat the story, so that you can test their understanding of it.
2. Do you have any clarifying questions about the story?
3. Do you have any ideas for how I might add to or improve the story or a particular shot?

4. Do you have any final feedback or comments?

In response to these guiding questions and those offered by the peer mentors, producer's discourse moves involved a range of complex argumentation strategies. As the pitch served as an argument where the producer(s) persuaded the peer mentor that they should be able to produce their proposed film, the purpose of most of the arguments were to prove they had thought out their production plan and had a clear story line.

In two pitch critique sessions at Jefferson Community School, 20.6% of producer discourse involved describing production plans as evidence of their ability to create their story. This also involved restating their plan numerous times and in different ways and adding new details for clarity. Producers also created claims (3%), often offering a claim with a clear reason (3%). Producers argued for credibility or authority to prove they were capable of achieving their production plan (4.7% of arguments were tied to credibility). Producers also acknowledged opposing arguments (3%); weighed the evidence of the opposition (1.5%); considered options (3%); and entertained the logical arguments offered by the opposition (2%) (See Appendix A).

Because the pitch session served as a gateway, students often used defensive argumentation. For example, Brianna and Lakonia, producers of "Escape The School" pitched their story to the peer mentor Amanda, shifting between forming arguments built of a claim and reason to back up their claims and credibility arguments meant to persuade their peer mentor that they would be able to complete their proposed idea. Brianna and Lakonia shared their story idea with Amanda, their peer mentor. They elaborated on a comic story about an evil phantom who lived in the ceiling at school who captured truant students. The story would begin with two lovers walking down the hall only to be trapped by the phantom who would capture the truant student leaving the lover to go find help. The lover would then run down the hall and find a

teacher. The teacher would have to decide between saving the student and her hatred for truancy. Eventually, the teacher would use a diploma to fight off the evil phantom and rescue the student (see Appendix B for a full transcript).

Although Brianna and Lakonia pitched their story as a love story, Amanda noted some confusing parts of the story and asked the two students to explain the significance of the two characters' relationship stating that there was little else in the film that demonstrated the relationship. When Amanda brought this to their attention, Brianna and Lakonia argued that they needed the lover because the film itself was a horror romance. But Amanda, who prodded her peers to think more critically about the relationship, started describing how she interpreted their story: "What's the lover's interaction with the person who is truant?" (line 10). This question prompted the two students to evaluate and engage in argumentation to determine a logical and manageable plot line (lines 11-36).

Initially, Brianna, who came up with the plot and character relationships and was hesitant to alter her original plan, yet slowly grew accustomed to the idea that the second character could still be in the film and serve a plot function, but that the relationship between the two was less important. In order to convince Brianna, Lakonia provided three points of data to back up her argument: it would be difficult to establish a relationship in a small amount of time (line 12); it would be easier (line 14); and the relationship wasn't important to the plot (line 31).

Toward the end of the pitch session, Brianna and Lakonia used arguments tied to *ethos*, trying to convince Amanda of their ability to accomplish complex tasks. Although Amanda questioned their plan multiple times, they attempted numerous approaches to ensure they could proceed with their lofty production plan. Toward the end of the critique session, Amanda brought up the filming once again stating that it seemed complicated and asked if they had the

equipment, time, and place to make the shoot successful. Although Brianna's *ethos* arguments were often not backed with evidence, she showed an understanding of the rhetorical situation: to move forward with their work they first had to convince Amanda that they had the time, resources, and skills to accomplish the task (lines 42-50). As Brianna and Lakonia worked to make the case that they were capable of filming such a complicated film, they argued first that they had thought out the process and where and how to film (lines 43-46), that they'd already considered what would happen if people interfere with the filming (line 48), and that they were fully capable of filming outside of school if they ran out of time (line 49). Brianna's last argument that in her head "it is a pretty simple story" (line 50) added to the previous statements in trying to establish *ethos*, or credibility.

Using Inquiry Strategies

Beyond the use of argumentation, many composers used inquiry to navigate the critique process and achieve their artistic vision. Most often, inquiry and repetitive questioning occurred during formal and informal critique during the production stage. While inquiry strategies used in informal critique sessions often mirrored techniques students used in formal, teacher assigned peer review sessions, the only instances of students using inquiry strategies and questioning during the pre-production stage occurred when composers asked questions provided on teacher created review forms such as the questions used at Jefferson Community School. Overall, the critique sessions that took place during the production stage were either driven by the producer's questions or reviewers exploring the film as a larger group. In these cases, particularly in the fishbowl critique sessions, reviewers did not ask any questions but instead fully explored the content at hand, making comments about a variety of aspects about the film with little to no teacher created questions.

Film	Critique Type	Stage of production	Primary Inquiry Strategy
"This is my life"	Informal critique with peers	Production Stage	Exploring Material
"Anxiety"	Fishbowl critique	Production Stage	Exploring Material
"Urban Legends"	Fishbowl critique	Production Stage	Exploring Material
"Silent Anger"	Three person peer review	Production Stage	Asking questions (7)
	Pitch critique session	Pre-production Stage	Asking questions (4)
"Trapped"	Rough cut with rubric	Production Stage	Exploring Material
"Living A Lie"	Informal critique with peers	Production Stage	Asking questions (4)
"Escape the School"	Pitch critique session	Pre-production Stage	Asking questions (4)

Table 5: Inquiry Strategies used during Critique

Critique that took place during the production stage is quite different from that which takes place during the pre-production stage. At this point in the production, composers often had a clear idea of what they wanted to achieve but were not quite sure of how to best accomplish more precise techniques. Consequently, they asked clear questions of their peers about specific content, changing the way they asked the question to get a desired response that would help them think more clearly about their artistic next steps.

During this stage in production, youth took part in formal critique sessions and more impromptu-informal feedback sessions with peer mentors. In both cases, students used similar types of inquiry strategies when participating in critique. To demonstrate the similarities in discourse moves, I offer two examples: Sam's "Living a Lie" and Marty's "Silent Anger." Both critique sessions took place after students had completed a rough cut of their film. The first example, Sam's "Living a Lie" took place informally at Jefferson Community School as Sam approached her peers about her work in progress in the computer lab while editing. The critique

session for the second example, Marty's "Silent Anger" took place at Horizon Arts during a more formal critique process where students were placed in groups of three and instructed to watch each film and provide 2-3 suggestions for improvement.

Sam's "Living A Lie". Toward the late stages of editing, Sam approached her peers about the opening shot of her film which included a small, yellow title at the bottom of the screen. She received numerous suggestions for improvement as her peers told her the title was hard to read. Although her peers suggested she make the title bold and increase the size of the font, she left the title in the same place without increasing the size. Rather than taking their advice, Sam repeated the same question seeking new approaches and answers. Sam, who had just changed the font color of her title slide to yellow, showed it to her friend sitting next to her. Her peers, Karin and Angela, offered suggestions to make the color of yellow a "butter yellow" and to make the text bold. The conversation continued:

1	Emily	It's going to be hard to read when it's that small. I like it in the center, but it's hard to read.
2	Sam	Okay, Emily! [Sam smiles at Emily, but does not increase the font size.]
3	Emily	Is it hard for you guys to read?
4	Angela	I don't think it's hard to read but you have to watch in full screen.
5	Sam	But it's washed out in the blue…
6	Karin	Oh, you could leave a black screen after and the yellow text would still be there!

Without prompting, Sam drove the dialogue through repetitive questioning to get feedback about a part of her video that she already knew was problematic but couldn't determine how to improve it and maintain the soft, romantic feel she'd created through the soft colored inviting font. She asked her friends first if the title was hard to read, which suggested that she was aware that the font was difficult to read (line 1). When her peers stated that it was okay, she added "but it's washed out in blue" (line 5) to seed additional responses. She ignored numerous suggestions from making the text bold, changing the color, or including a black screen at the end

of the shot, but when she found the answer that met with her vision and improved the readability she shifted to including a black intro that faded into her first shot. Her repeated questions suggest that she had already clearly determined the color, font, and size of the title, but was seeking new, innovative means to make the title more apparent for the viewer.

Marty's "Silent Anger". Just as Sam tried varied methods to inquire about the same moment, altering her question slightly in order to gain more specific or varied responses, Marty, who participated in a formal peer review process with two of her peers used similar questioning trying to take direction in gaining meaningful feedback. For this peer review session, students were charged with reviewing one another's rough video footage and giving each person at least two suggestions for change. Marty, who created the movie "Silent Anger" did not receive the kind of response she sought and so asked her peers questions in attempts to gain clearer and more direct feedback:

1	Lennon	Um there were times when the camera was kinda shaky, which it can really pass because it was like kinda intentional because like the vibe was like...
2	Marty	But it worked?
3	Lennon	Yes
4	Marty	So shaky, but it worked?
5	Lennon	Mm hmmm
6	Marty	If I had had dialogue, is there any dialogue you think I should have added? Like any actual story or do you think it would work better if the character is just silently being mad?
7	Lennon	It really depends on how you want to take it. Because do you want there to be like a motive I guess you could say or do you want people to interpret it their own way? I don't know what you want.
8	Marty	I wasn't sure, that's why I'm asking. I'm asking whether you think it would be better if there was a little bit of story or better if it's left up less completely up for interpretation?
9	Lennon	I think I liked it like that. Like.
10	Marty	Yeah. So silent works well?

During this conversation, Marty altered and repeated her questions as she appeared unsatisfied of her own production choices and of her peers' feedback. In the first instance, she asked if the shakiness of the camera worked and then followed up repeating with an added "so shaky, but it worked?" (line 4) to ensure that her peers were pairing these two comments together in that the shakiness of the camera added to the mood of the film. In the second instance, Marty asked the same question three times. First she asked a broad question about whether or not to include audio to show that the character was mad and to create a clearer story (line 6), secondly she repeated her question (line 8), switching both the order of the question and adding that the lack of audio would mean the viewer would have to interpret the story, a comment inspired by Damon's comment. After Damon stated that he liked the video as is, Marty asked one more time "Yeah. So silent works well?" (line 10).

Both of these dialogues demonstrate youth created inquiry. Sam's questions serve as an example of unprompted youth initiated questioning and Marty's questioning took place during a peer review session with little direction other than to provide feedback. In both cases, the young composers took direction in the conversation as they felt unsatisfied and unsure of their peers' feedback. In a process that is often reviewer driven, Sam and Marty, without prompt, took over the conversation steering their peers toward specific moments of their work of which they were unsure. Their process moved beyond guidelines provided by their teachers or asked on a peer review sheet, but were inventive ways that the composers were able to push the conversation for their own intended purposes. Rather than entering critique as a passive recipient of feedback, they knew areas of their film that were still in progress and tried to steer their peers toward dialogue about those unfinished parts.

Critically Evaluating Feedback

Just as composers make numerous decisions during critique, they must also determine whether or not they wish to incorporate their peers' feedback into their films. Amanda, a young video composer from Jefferson Community School, explained the options as follows:

> They always have the option to accept or deny feedback. So if I say that they should change their text color to black and they have it white like that's a creative decision on their part. Not really anything that's that detrimental and so they can be like "Well I disagree so I'm not gonna change that" and that's cool and that's fine (interview, January 21, 2019)

Yet youth also often follow another option: combining feedback with their own vision to create something new. In my research, composers tended to use feedback in three ways: they incorporated feedback directly into their work; they rejected and ignored feedback; or they incorporated some element of the feedback in a way not originally intended. Incorporating feedback into their revisions, youth defined the boundaries of their work and transferred, applied, and adapted new methods.

Using Feedback to Define Boundaries

For young video producers, defining boundaries often involved taking feedback from peers and adding the feedback directly into their final videos. Most often, feedback that was incorporated directly into the final film commented on the movie in its current state, such as stating that a part of the film was confusing, paired with a suggestion for improvement. However, when feedback was too specific, composers often did not take their peers' suggestions. Suggestions that were broad and left room for the composer to use their own creative approach to the changes often were incorporated in an additive manner.

Film	Feedback that was not included	Feedback that was included

"Anxiety"	"Maybe start with the key and the door going back and forth trying to put the key in the door but they can't" "…Uh I didn't really understand it so I was thinking maybe she could have or they could have her pacing around deciding away from a phone call of go away." Add more lighting to the door scene because it was hard to see. Couldn't see the door handle Suggestions: get shot from outside of door and an extreme close up	Camera is shakey; should use a tripod "The power of silence was very portrayed there" but...add audio to portray anxiety such as a heartbeat or clock ticking"
"Urban Legends"	Character roles were confusing	"The body language was weird. It was like Dan was really like enthusiastic…not enthusiastic…it was he was showing more like body, I guess you could say um…and it cut over to Nate and um they were like awkwardly there and I can't tell if that was on purpose or not."
"Trapped"	"Shorten the length climbing up to the shower" Make sure the passing of time is obvious by adding a clock or a transition slide that shows this. "be like 'a hundred years later' and then show the final screen It was unclear that the kitten was climbing; maybe have a slide that says "kitten decided to climb to look for an escape route"	"Show evidence of them trying to escape with various methods" "Show the passing of time by having it gradually get darker as he is slumping down and…"
"Living A Lie"	"use a black screen with birds chirping" Make the title bold The title: "it's hard to read that small"	Try using a black screen with the title so it is easier to read; "Add some kind of audio, sad audio" You need a fade intro
"Escape The School"	"So you could just do like a stop motion like image of her being like "oh!" on the wall but not her actually climbing because that would be kinda hard"	"Like I don't see that the person the lover um lover's, number two. Is it really interacting with it because like they're just walking and then suddenly he freaks out and then suddenly he's like 'where is he?' 'what is he doing?'"

Table 6: Feedback used to Define Boundaries

Suggestions about audio and visual choices such as "add some kind of audio, sad audio" and "add audio to portray anxiety such as a heartbeat or clock ticking" were taken up directly as

the peers themselves provided feedback in keeping with the composer's vision of the message or mood of the video. In this way, their peer's feedback helped them expand upon and heighten what they already understood to be their vision. The additions did not drastically change their work. Composers could incorporate broad feedback while still maintaining their unique artistic vision in choosing what sad song or what sound they used to best fit the mood of their work.

Defining boundaries also meant rejecting feedback sometimes even multiple times. For example, Claire, producer of "Trapped" received three suggestions from two different peers about specific ways that she could improve her video to show the passing of time yet did not incorporate any of the suggestions in her final video. Claire's movie involved a character who was supposed to be trapped in a room for hundreds of years. She was offered three, specific suggestions to improve the clarity of the plot from two different peers including that she should add a clock to show the passing of time or including a slide that says "a hundred years later." While Claire originally responded to her peer by agreeing, her final video included no means to demonstrate the passing of time as discussed with her peers. However, when her peer suggested that she could show that the character was trapped in the room by showing numerous methods of escape and showing the passing of time by having the film get darker and having the character slump down in defeat, Claire used this feedback directly into her movie. The difference in why Claire used the less specific feedback and denied the more clearly articulated means to use editing to fix the inconsistency seem puzzling especially as even in her final video there was no indication of time passing and she even commented that if she could recreate this movie she would "make certain actions more clear and hold the camera farther away to establish the scene & what's going on a lot better." However, a description from her final reflection sheds light on her production decisions. While the assignment had certain requirements such as that it needed to

be a silent film, include a title slide, and a credits slide, Claire's unique additions were inspired by and she attempted to mimic the popular Youtube series "Pokemon Talk" which included plush toys with limited movements in a stop-motion animation arrangement. In Claire's attempt to mimic the style of "Pokemon Talk" she used only production decisions that reflected this style. Slides suggesting the passing of time did not fit with her stylistic vision while suggestions for darkening the film and having the character slump down were in keeping with her original vision for the film.

Claire's approach demonstrates careful artistic considerations, yet she never vocalized her full plan to her peer reviewers. Had she done so, she may have been able to move the conversation forward by pairing her vision with that of her peers in order to come up with a solution that both demonstrated the passing of time while keeping with her intended vision.

Synthesizing Ideas: Using Feedback for Transfer, Application, and Adaptation

While more difficult to trace, young composers often took up feedback indirectly transferring feedback into other areas of their work. While this occurred less often than composers either outright accepted or rejected their peers' feedback, the learning process taking place through this type of transfer demonstrated higher order thinking. Of all instances except one where composers incorporated feedback indirectly into their films, the feedback was extremely broad and offered no clear suggestions for how to improve the film. However, composers embraced their peers' feedback and applied the feedback more broadly to improve the overall film.

Incorporating feedback in this manner drove the revision process of the young composers of "Anxiety." "Anxiety" was a collaborative effort of four students. The silent film portrayed the struggles of a young person who suffered from social anxiety. The film involved one actor

attempting to leave their apartment to go to a party. To demonstrate the feeling of anxiety, the film started with the actress trying to put her keys in the door, turning and fumbling with the keys, walking back and forth, and quick camera shots that switched back and forth from the door knob to the actor's face. Eventually, the actor makes it out and goes to the party.

During a whole class fishbowl critique session, the group received several suggestions about parts of their film that did not seem to portray anxiety, but rather some other emotion such as anger or indecisiveness. While the group did not take up their specific suggestions about how to improve this, the message of inconsistency became their focus for revision. Marty, one of the young composers from the group commented "I think a lot of the feedback we had was the audience was confused through a lot of it because we didn't have everything fixed altogether. I think they talked about fixing continuity because we had struggled a bit with that" (interview, January 28, 2019). To create a more cohesive message, the group came up with new ways to ensure the audience felt the character was anxious rather than angry such as adding slow and fast paced music to create the mood and match the character's actions as well as a heart beat to show the character's growing anxiety. Marty described how she saw the role of anxiety becoming apparent for their audience:

> Um I think the biggest thing for me that would point to anxiety would be the actor credit scene where the character dressed in black is sitting and resting against the door because I feel like a lot of who have anxiety in this school has a lot of kids with anxiety. They'll say that they can get out and do fun things, but their anxiety lingers and they just have to kinda shut it out for awhile and I thought that illustrated that well. I'm not sure if other students took it that way, but I would have (interview, January 28, 2019).

Inconsistency became a focus for this group even after they finished their video. While their peers had suggested refilming shots of the door the character was trying to open for consistency, the group left the shots as is. This inconsistency is fairly apparent: the main character tries to fight her anxiety while holding a set of keys near the door, trying to find the strength to unlock the door; however, the shots of the door led to a door that did not have a keyhole. While there was an in-depth conversation about this during the critique session, the group chose to not refilm this part. However, after the film was complete the producers were very critical of other parts of the film that still had inconsistencies. For example, they shot in the same room for a few days and couldn't get the desks set up exactly the same way, they felt the lighting was different coming through the windows on different days, and in a shot where the main character is battling her inner anxiety, we saw hands from both the good and evil part of her inner self one wearing black and the other wearing white and as their hands battle we see a contrast in that one hand has short nails and the other has long nails. While these inconsistencies were difficult to find as a viewer, they pressed on the minds of the creators even post production.

Discussion

Throughout this article I sought to understand what classroom practices are used to guide composers through critique and how youth navigate the digital critique process. In this discussion, I explain how the critique practices used in the video production classroom open up the possibility that studio "habits of mind" may be acquired in traditional education settings and available for a wide population of learners. I demonstrate how the processes youth use to navigate the critique process are similar to those of skills found in participatory cultures and explain how the educators in this study used critique to bridge out of school learning strategies with academic pursuits. I close by offering several classroom implications.

Digital Critique Practices in Video Production

The educators in this study used a variety of approaches to critique that moved beyond the traditional practices of peer review, writer's workshop, and studio models. Amanda's use of a rubric started off mirroring that of peer review found in composition classrooms, but took on a lasting informal practice as students continued to comment on one another's work using the same guiding principles. Bruno used a variety of methods from a peer review that ended with a whole class discussion of feedback to a fishbowl critique session created a more distributive method of critique that offered constant reflection. Andy's use of near peer mentors allowed students to learn more about film production from someone near enough in language and experience making it easier to approach disciplinary specific language and practices.

When video production is introduced into the classroom, it is important for educators to also explore how critique of video is different from other forms of text. Using a traditional peer review, for example, might help students improve upon rhetorical decisions or provide feedback to their peers, but may not provide the opportunity for students to learn important disciplinary knowledge that could be possible through other means of critique.

The critique models I found throughout this research moved beyond the practices of peer review, writer's workshop, and the studio model of critique. While there were overlaps with peer review such as a focus on reflection and recognizing composition as a social process, digital critique processes also allowed students to learn the skills of the profession, to value creativity, and to learn disciplinary literacies. Digital critique borrows from the writer's workshop and the studio model in this way. Through the inclusion of disciplinary knowledge and a focus on creativity during critique, educators can bring studio "habits of mind" into formal classroom environments and open up the possibility for a wide population of learners.

Digital Critique as a Bridge to Participatory Cultures

Although previous research suggests that it is difficult to transfer the type of collaborative learning opportunities found in participatory cultures to formal classrooms settings, my research demonstrates that educators can leverage these same skills through scaffolding critique practices. Examining the critique processes of youth video production, I found that the practices youth engaged in mirrored many of the practices found in participatory cultures (see Appendix C). Participatory cultures promote play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking, negotiation (Jenkins et al., 2007). While most of these skills can be found throughout the video production process, most of the skills are embedded in the process of critique. Critique involves multitasking--the ability to scan one's environment and shift focus as needed to salient details; networking--the ability to search for, synthesize, and disseminate information; promotes distributed cognition--the ability to interact meaningfully with tools that expand mental capacities; and collective intelligence--the ability to pool knowledge and compare notes with others toward a common goal (Jenkins et al, 2007). Critique exercises such as the fishbowl critique in Bruno's classroom allowed the entire class to analyze their peer's work, provide feedback, and take charge of the conversation. As students moved in and out of the critique circle, their voices and opinions became part of the larger knowledge base moving thinking forward.

The discourse moves youth engaged in during the critique process also mirrored that of two skills central to participatory cultures. Judgment and negotiation--the ability to evaluate the reliability and credibility of different information sources and discern and respect multiple perspectives (Jenkins et al., 2007)--reflect the argumentative and inquiry moves youth took part

in during critique. Most often, these discourse moves took place during critique that occurred during pre-production before ideas were internalized and formalized through the act of filming. Once students film, they are often reluctant to refilm (Motley, 2017). They may also be less likely to engage in argumentation or inquiry in critique as they may be less interested in altering their work except for minor edits that can be completed through the post production phase. These moments of critique are essential moments of learning in video production as students are presented with new and sometimes conflicting perspectives and are challenged to think about their work in a new way. Learning occurs in these moments when young producers talk to each other about their work (Lave & Wenger, 1991).

The educators in this study bridged the environments of participatory cultures and the formal classroom setting through creating numerous opportunities for students to participate in critique, reflect on the practice itself, and continuously refine practices. For example, after Bruno's students took part in the fishbowl critique process, he led students through a meta-reflection of the process. Students were also often asked to reflect on the feedback they received and the feedback they gave and think forward about how they might continue to improve their own practice. All three of the educators--Andy, Bruno, and Amanda--regularly integrated peer critique and collaboration into their classroom, helping more students practice the kinds of skills that are most often found in online and out of school spaces.

By opening up the classroom space to the type of learning possible through participatory cultures, teachers can help all students navigate the advantages of new media literacies. Video production affords many of the same opportunities found in participatory cultures. There are relatively low barriers for youth to begin and through the act of creating video youth are provided a means for artistic expression and exploration. Video is easily shareable. There are

numerous avenues for sharing video from YouTube, Vimeo, to Snapchat. These avenues allow for feedback not only from local communities and friends, but from people of all ages across the world. Finally, video production opens itself up for collaborative exploration where youth of all experience levels work together for a single vision. Classroom teachers can nurture this relationship to promote mentorship and ensure a collaborative experience where each voice matters.

The collaborative process of video production and critique can serve as a bridge in merging out of school learning strategies with academic pursuits. After all, not all youth have the opportunity to take part in out of school opportunities and there is a disconnect between the out of school worlds where youth are composing and developing their own critique practices and in school practices (Ito et al., 2013; Buckingham, 2007). Those youth who have the ability to partake in out of school opportunities and are introduced to advanced uses of technology benefit from the type of learning offered through new media, while those students from non-dominant communities who rely on school opportunities are not provided the same advantages (Ito et al., 2013).

Classroom Implications

In order for youth to benefit from the affordances of new media literacy, they must first be given the tools necessary to succeed. Helping young people build these strategies of discourse--argumentation and inquiry--will help them benefit from the distributive learning found in participatory cultures. Although the young composers in this study used argumentation, inquiry, and feedback strategies throughout the critique process, many occurrences also reflected weak arguments and logical fallacies. Some inquiry practices were even halted as composers repeated the same approaches--rather than trying different approaches--in attempts to gain varied

results. Through examining their discourse moves, the findings of this study suggest that young composers could benefit from further refining these same skills. Helping students successfully navigate this process will not only create the potential for increased learning, but will help students take more control of their own learning as they are more able to articulate their ideas and questions. To this end, I offer two important considerations for new media learning.

Teaching Discourse

In order to participate in critique, young composers are often provided little instruction about how to participate. Instruction often includes rules about civility, how to best frame feedback so that it is focused on the text rather than the person, and they are often provided a list of questions to guide the process. All of these strategies are essential in setting the context and process of critique, yet composers would benefit from instruction and practice in creating arguments, defending artistic choices, explaining their rationale, and asking clear and specific questions. When composers are faced with new and conflicting ideas and have to defend their work they engage in important discourse necessary for advancing knowledge. However, young composers do not always know how to best take part in this discourse--mentors and educators can help young composers adopt the new discourse, helping them find agency in this important learning opportunity. Through argumentation and inquiry practices, young composers engage in the kind of discourse found in video production and graphic design communities where composers are expected to defend their work, show confidence in their choices, and explain their decisions (Motley, 2017).

Rethinking Feedback

Across all of the young composers who are featured in this study, a common reaction occurred when composers were given specific feedback for improving their video: they rejected

the feedback. However, when feedback left room for interpretation and for the composer to insert their own unique creative approach to revising, feedback was often taken up. Abstract feedback allowed for composers to accept their peers' feedback while still maintaining a feeling of ownership. While youth wove their peers' ideas into their work, they often remained dedicated to ensuring that their final representation reflected their individual approach. Collaboration, for these young producers, was not about directly integrating specific suggestions or changes, but rather reflected the new media literacy mindset which builds on collaboration, participation, and distributed expertise (Jocson, 2018).

Additionally, this study suggests that composers benefit from different types of feedback at different stages in the production process. While specific feedback was useful early in production, young composers were more likely to take up more abstract, global suggestions during the production stage. This may be because composers are reluctant to refilm after they've already done so much work (Motley, 2017). Yet, this does not mean that composers do not use or benefit from feedback at this stage. In this study, they used more global suggestions that allowed them to blend feedback with their own vision.

The recognition that composers use varied types of feedback at different stages in the process and that most composers were more likely to incorporate broad suggestions that allowed them to keep their own unique vision has practical applications for the literacy classroom. While it is not easy to give feedback that touches on the larger nature of a film---such is that the message feels inconsistent or the mood of the film does not mirror the plot--this type of feedback allows for composers to re-visit their film as a whole rather than eliminating one moment of the film. More importantly, this type of feedback allows composers to re-enter their work with a

fresh, varied perspective. In turn, they develop new knowledge as their ideas are put in contrast with those of their peers.

Conclusion

As educators continue to integrate new media into the classroom, it is important to design learning opportunities that build on the affordances of new media. New media--from video to blogs to educational games--is not beneficial solely because of technology, but because of what technology affords. New media allows for learners to collaborate, to communicate using multiple modes of expression, and to benefit from the distributed nature of learning. Educators can help students build new media skills through teaching critique practices and creating opportunities for students to practice and build upon discourse skills to advance these moments of learning. Because critique practices mimic those practices often found in participatory cultures, educators can use critique as a way to build a bridge between out of school practices and academic endeavors. By doing so, educators can help all youth become media producers.

Appendix A

Argumentation in Pitch Critique Sessions at Jefferson Community School

	"Escape the School"	**"Trapped"**
Is the storyline clear? If no, what is unclear? If yes, ask them to repeat the story, so that you can test their understanding of it.	**Peer Mentor** Suggestions of additions (0) Critique of current state (2) Asking clarifying questions (3) Restating production plan (2) Agreeing (0)	**Peer Mentor** Suggestions of additions (2) Critique of current state (0) Asking clarifying questions (1) Restating production plan (0) Agreeing (1)
	Producer(s) Creating a Claim (1) Claim + reason (1) Providing evidence ● Production Plan (5) Restating production plan (4) Weighing evidence of opposition (1) Acknowledging opposition (1) Agreeing (3) Offering alternative answer (3 *Two of these are false starts*)	**Producer** Creating a Claim (0) Claim + reason (0) Providing evidence ● Production Plan (1) Restating production plan (0) Weighing evidence of opposition (0) Acknowledging opposition Agreeing (2) Offering alternative answer (1)
Do you have any clarifying questions about the story?	**Peer Mentor** Critique of current state (0) Asking clarifying questions (3)	**Peer Mentor** Critique of current state (1) Asking clarifying questions (2)
	Producer(s) Creating a Claim (1) Claim + reason (1) Reason for claim (1) Providing evidence ● Production Plan (1) ● Authority Agreeing (2) Offering alternative answer (0) Brief, affirmative answer (1) Starting to describe decision (1)	**Producer** Creating a Claim (0) Claim + reason (0) Reason for claim (2) Providing evidence ● Production Plan (0) ● Authority Agreeing (0) Offering alternative answer (0) Brief, affirmative answer (0) Starting to describe decision (0)
Do you have any ideas for how I might add to or improve the story or a particular shot?	**Peer Mentor** Suggestions of additions (0) Weighing Logic of Evidence (0) Asking clarifying questions (1) Agreeing (1)	**Peer Mentor** Suggestions of additions (1) Weighing Logic of Evidence (2 Asking clarifying questions (2) Agreeing (0)

	Producer(s) Providing evidence ● Production Plan (2) ● Authority (2) Restating Evidence (1) Weighing Logic of Evidence (0) Acknowledging opposition (1) Agreeing (2)	**Producer** Providing evidence ● Production Plan (3) ● Authority (0) Restating Evidence (0) Weighing Logic of Evidence (2) Acknowledging opposition (0) Agreeing (1)
Do you have any final feedback or comments?	**Peer Mentor** Suggestions of additions (4) Critique of current state (0) Compliments (0) Asking clarifying questions (1) Weighing Logic of Evidence (0) Restating production plan (2) Agreeing (0)	**Peer Mentor** Suggestions of additions (3) Critique of current state (2) Compliments (1) Asking clarifying questions (0) Weighing Logic of Evidence (2) Restating production plan (0) Agreeing (2)
	Producer(s) Providing evidence ● Production Plan (1) ● Authority (0) Arguing for weak production plan (0) Acknowledging opposition (0) Considering options (0) Agreeing (4) Self deprecation (0) Offering alternative answer (0)	**Producer** Providing evidence ● Production Plan (0) ● Authority (1) Arguing for weak production plan (4) Acknowledging opposition (0) Considering options (2) Agreeing (1) Self deprecation (2) Offering alternative answer (1)

Appendix B

Excerpt Transcript from "Escape The School"

1	Brianna	And then yeah. And we're going to have Bela play [the phantom] and we have an idea for like the costumes. We're going to print out a picture of like his profile and then like tape that onto her face and then we have like we have this thing…uh…this idea that he like when he comes down from the ceiling he scuddles across the walls and stuff.
2	Lakonia	We'll get angles so it looks like it's the wall
3	Brianna	Yeah, and it's going to be like Godzilla almost. Like it is going to be shots from down here and it'll be "huhhh" like it will be intense, it's going to be beautiful
4	Amanda	How are you going to film it so that it looks like she's walking on the walls?
5	Brianna	What we're going to do is have it like, like, it is all about angles. So right so we are going to film it up like we are here and then she is going to be like really close to the wall and we're going like have it so that like you don't get any shot of the floor and we're going to make it so that she is like higher up just because like like all wall kinda looks the same pretty much
6	Amanda	Yeah. Depends on if there is like a blank wall or something on the wall.
7	Brianna	Right, so exactly. We'll get a blank wall so you can't really tell and then we'll like angle it right. So the wall looks like attached to the wall
8	Amanda	So you could just do like a stop motion like image of her being like "oh!" on the wall but not her actually climbing because that would be kinda hard
9	Brianna	Exactly. Exactly. It will look like she is at least like attached like she's like hanging there. You know what I mean? So like uh like the movement might be a little difficult to pull off but I just think that an experiment. We're going to see what works and it is going to be amazing.
10	Amanda	So then um…how is the lover, what's the lover's interaction with the person who's not doing their homework?
11	Brianna	So basically like….
12	Lakonia	Probably don't need one. Cause I feel like it would be like a whole nother relationship to establish in a short amount of time we have
13	Brianna	That's true.
14	Lakonia	So it would be easier to just not…
15	Brianna	That's true
16	Amanda	Like I don't see that the person the lover um lover's, number two. Is it

		really interacting with it because like they're just walking and then suddenly he freaks out and then suddenly he's like "where is he?" "what is he doing?"
17	Brianna	Right, like "where is he?" and then he sees the struggle and is like pulling and it's going to be one of those slapsticks like where he's pulling and there's this like literal back and forth he's like, he's like trying to get [the phantom] when he's like "huh" but then he grabs him again and so like there's like this like um like kinda back and forth where you're trying to get him off and get him away. Um but [the phantom] is strong, he's a strong creature so he's like
18	Lakonia	there's a lot of [hatred?] in there…
19	Brianna	He's very persistant so uh he's like and then he calls out and there's going to be text like "[Teacher]!" and then [the teacher]
20	Brianna	Yeah, so basically this person is getting it taken away because they didn't get their their work in on time and you are like "do I save them?" and you have to make this decision of like, like, like, do I like save them or do I let them be taken away by [the phantom] and finally you're like you know what I'll save them I am that type of person and you shoo them away with the diploma
21		[Interruption of school announcements]
22	Amanda	So um..should write this stuff down.
23	Brianna	Yes.
24	Amanda	But the way I'm seeing it though is that the lover…
25	Brianna	Yeah
26	Amanda	They're getting chased by [the phantom] and the lover number one who didn't do his homework is getting snatched and lover number two is like pulling at the opposite end so it's like love number one [the phantom], lover two trying to pull [the phantom] off of lover number one…and then like lover number two just kinda disappears out of the whole entire movie?
27	Brianna	It's more like
28	Lakonia	He's like [teacher, teacher]!
29	Amanda	Oh so he runs off to get [the teacher] and never comes back?
30	Brianna	Well, it's, it's, it's…more of like…
31	Lakonia	I think what she's trying to say is that it doesn't seem…the other lover doesn't seem really important to the plot…it's just a
32	Brianna	Right…well like you have to have that person because like, like who
33	Lakonia	Or
34	Brianna	Who is gonna like trigger the resolution which is like [the teacher] fighting them off? And like. OH! And we could have like like where the lover has to convince [the teacher] to to save…their friend.
35	Amanda	Yeah, lover number two just kinda like yells [the teacher] and pulls [the phantom] off of lover number one and just kinda stays there and is like [teacher, teacher]!

36	Brianna	Please, please. Yes exactly. They have to be convincing so it's like the struggle of like please I need your help and he like has to get that help in time. And like it's like this struggle because he's like I don't know if I'm going to be able to do that basically
37	Amanda	Okay, so what else do you need?
38	Brianna	Um….do you have any clarifying questions about the story? (laughs) We just went over that? (laughs)
39	Amanda	Okay, next?
40	Brianna	Um, do you have any ideas for how I might add to or strengthen the story/ scene?
41	Amanda	Yes, we just went over that.
42	Brianna	Yes! Do you have any questions for how I'm going to shoot the story (laughs)?
43	Amanda	Um..yeah. How like this seems like pretty complicated. Do you have the equipment and time to be able to do this and where are you going to do it?
44	Brianna	Yes. Yes. And we're thinking like maybe probably the hallway
45	Amanda	Okay
46	Brianna	Or like just some area where we can have like a neutral wall basically. Like either, either the hallway because that seems like a good setting. Um
47	Lakonia	Yes
48	Brianna	But if that doesn't work out because like people coming through or whatever. Whatever happens. But just like a neutral hall
49	Lakonia	If the time gets too crunched then we can always we can do it outside of school too.
50	Brianna	Yea, and I feel like it sounds complicated when you explain it but like in my head it is a pretty simple story
51	Amanda	Have you drawn out a storyboard yet?
52	Brianna	Um not yet but that's the next step
53	Amanda	Okay, you should do that next.

Appendix C

Overlapping skills in Video Production and Participatory Cultures

Participatory Culture Skills (Jenkins et al., 2007)	Skills found in Video Production
Play — the capacity to experiment with one's surroundings as a form of problem-solving	Takes place throughout video production process
Performance — the ability to adopt alternative identities for the purpose of improvisation and discovery	Takes place during planning and production stage
Simulation — the ability to interpret and construct dynamic models of real-world processes	Takes place through the creation of and production of video
Appropriation — the ability to meaningfully sample and remix media content	Takes place through video production
Multitasking — the ability to scan one's environment and shift focus as needed to salient details.	Takes place through the critique process
Distributed Cognition — the ability to interact meaningfully with tools that expand mental capacities	Takes place through the critique process
Collective Intelligence — the ability to pool knowledge and compare notes with others toward a common goal	Takes place through the critique process
Judgment — the ability to evaluate the reliability and credibility of different information sources	Use of argumentation through critique
Transmedia Navigation — the ability to follow the flow of stories and information across multiple modalities	Critique of video requires navigating multiple modes of text
Networking — the ability to search for, synthesize, and disseminate information	Takes place throughout the critique process
Negotiation — the ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative norms.	Use of argumentation through critique

Chapter 3: “Boom! Now we know how to do it”:
Video Production for Authentic Collaborative Experiences

9:00 am Tuesday

Heather, a sophomore in high school, races to class to sit down just in time for the bell. She joins four of her classmates to complete the assigned task: create potential test questions using class notes as a way to study for the upcoming test. Heather flips through her notebook, jots down some ideas, and eventually shares these with her peers who do the same. They write down their questions on one piece of paper, sign their names, and turn in their paper as the bell rings for their next class.

6:00 pm Tuesday

Heather finishes her homework and races to her room to join her peers who are already engaged in an online chat about a bullying incident that just happened at school. They brainstorm ways they might address the incident, adults they may turn to in order to ensure that an incident like this never takes place again, and determine next steps for speaking up against the bullying they witness in their school. Heather offers to write down everyone’s ideas so she can take them to her trusted mentor at school the next day and her peers take on a variety of tasks from writing an editorial for their school website to starting a Twitter campaign.

Like many young people, Heather’s day is made up of very different group dynamics: some where she is encouraged to work with her peers to complete a task that does not necessarily require collaboration and some where she feels a need and desire to collaborate with her peers.

Knowing that collaborative skills are essential for young people like Heather, it is important for educators to find ways to create more authentic collaborative experiences to integrate into the classroom. To participate in today's technologically driven world, young people need new skills--mostly social skills--that are developed through collaboration (Jenkins et al., 2007). In online and out of school environments, those that Jenkins et al. (2007) call "participatory cultures," young people engage in authentic, interest driven collaboration, providing feedback, sharing work, asking questions, and offering one another mentoring on a continuing basis. In these environments, young people gain the kind of collaborative skills which are necessary for their own future and for the future of our complex world. These skills, from multitasking, making judgments, networking, negotiating, collective intelligence, and distributed cognition, are essential for young people's ability to fully participate in local and global communities (Jenkins et al., 2007).

Of course students can and do learn from one another all of the time in and out of school. Yet collaboration doesn't just happen because students are placed in groups. Asking students to work together to complete a task that could easily be completed alone does not encourage students to solve problems, to discuss options, or to work as a team and group work can feel inauthentic when collaboration is not actually required to accomplish a task. For students to benefit from the type of collaboration found within participatory cultures in a classroom environment, educators must create opportunities where collaboration is required in order to be successful.

This article examines collaborative practices in three classrooms to determine how teachers may best create authentic collaborative experiences through video production. I ask two questions to guide this research: 1) what models do educators use to promote collaborative video

production and 2) what does collaborative video production afford learners? I argue that understanding the phenomenon of collaboration requires an ecological approach encompassing people, place, technologies, and activities (Caldwell, Bilandzic, & Foth, 2012). Therefore, I begin with a comprehensive look at three video production classrooms examining the context of the classroom, the teacher's philosophy on collaboration, and the models they use for collaboration. I describe the three different collaborative models used in the classrooms and conclude that video production, because of its numerous working components, lends itself to authentic collaborative production. Specifically, I demonstrate that collaborative video production affords learners the ability to:

- Participate in collaborative problem solving for a shared purpose;
- Expand their understanding and stretch their mind through using new tools;
- Navigate group dynamics and work as a team;
- Learn from peers of various ability levels who have a shared language and understanding.

Learning Ecologies

The classroom is part of both a larger ecosystem that dictates such features as rules, regulations, and curriculum and is itself a smaller ecology. Much like many natural systems from rivers to forests, classrooms involve shifting relationships between organisms and their environment (Spires, Oliver, & Corn, 2011). In the case of the classroom, this involves students, teachers, technologies, activities, and both the physical and virtual spaces that afford learning (Barron, 2006; Caldwell, Bilandzic, & Foth, 2012). Each one of these elements are equally complex on their own. Each educator, for example, brings unique perspectives from their experiences, their training, and their philosophical approach to learning. Each student brings their experiences, their interests, and their expertise. In the classroom environment, all of these

elements are brought together and are ever-changing and constantly influenced by their connection to each other.

Learning ecologies encompass place, people, technologies, and activities (Caldwell, et al. 2012). In order to understand what video production or collaboration looks like in a classroom or what it can afford learners, therefore, requires an ecological understanding of where the activity is situated within the larger context. I argue that we can understand how collaboration functions in the video production classroom by investigating 1) the place: the larger school environment and the school's philosophy; 2) the people: students and teachers and the experiences and philosophies they bring with them into the classroom; 3) the technologies: the video camera, audio equipment, editing software; and 4) the activity: the entire video production process from start to finish. Image 1 reflects the many elements influencing the activity of collaborative video production.

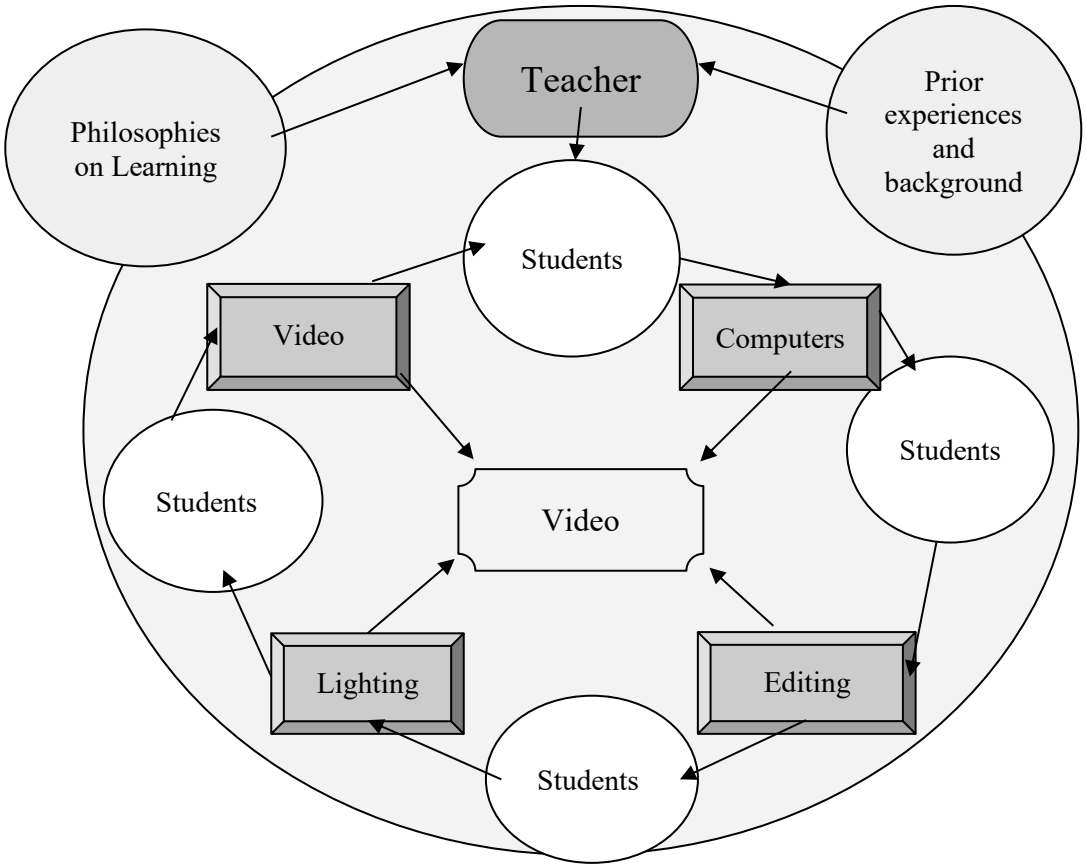

Image 1. Learning Ecology of the Video Production Classroom

Collaborative Learning versus Cooperative Learning

Most educators today recognize that students benefit from working with their peers. They understand that intelligence is ever-shifting and socially constructed through a series of interactions with other people (Pea, 1997; Vygostky, 1978). From discussing various viewpoints, sharing relevant knowledge, generating ideas, and constant discussion and interaction, students benefit from the collaborative knowledge-building process (Stahl, 2006). Yet placing students into groups does not necessarily ensure that learning--or even collaboration--will occur. Students who are placed in groups to complete an assignment often split up group work and complete assignments individually, working together only to compile answers (Sormunen, Lehtiö, & Heinström, 2011). Students may not even look at or explore their peers' work, compiling

answers only for a more efficient means of finishing an assignment. When students work together in this way knowledge is not constructed, but compiled. Students are cooperating, not collaborating. The two related terms involve very different moves: collaboration involves people working on something together, whereas cooperation involves dividing up the work and bringing it back together (Stahl, 2006). The goal of cooperation is more about motivation and task specialization; collaboration, on the other hand, requires students working together throughout a project (Sormunen, E., Tanni, M., Alamettälä, T. & Heinström, J., 2014). Both lead to entirely different learning processes as cooperative learning is accomplished individually where collaborative learning is a shared building of knowledge (Roschelle and Teasley, 1995 & Stahl, Koschmann, & Suthers, 2006). Collaborative learning allows students to not only gain and grow their own intelligence, but build knowledge through their community. In collaborative learning, students work "together as a group to complete an activity, and cooperate as individual students adopting different roles or tasks in completing an activity" (Sormunen et al., 2014, p. 1218). Simultaneously, two connected moves take place. Students collectively advance group knowledge while building individual knowledge. Scardamalia & Bereiter (2006) call this the "knowledge-building process": students construct knowledge through complex discourse rather than the compilation of ideas (Stahl, 2006). Inquiry becomes a collaborative process and the goal becomes to advance the knowledge of the community (Scardamalia & Bereiter, 2006). Image 2 visualizes the knowledge-building process.

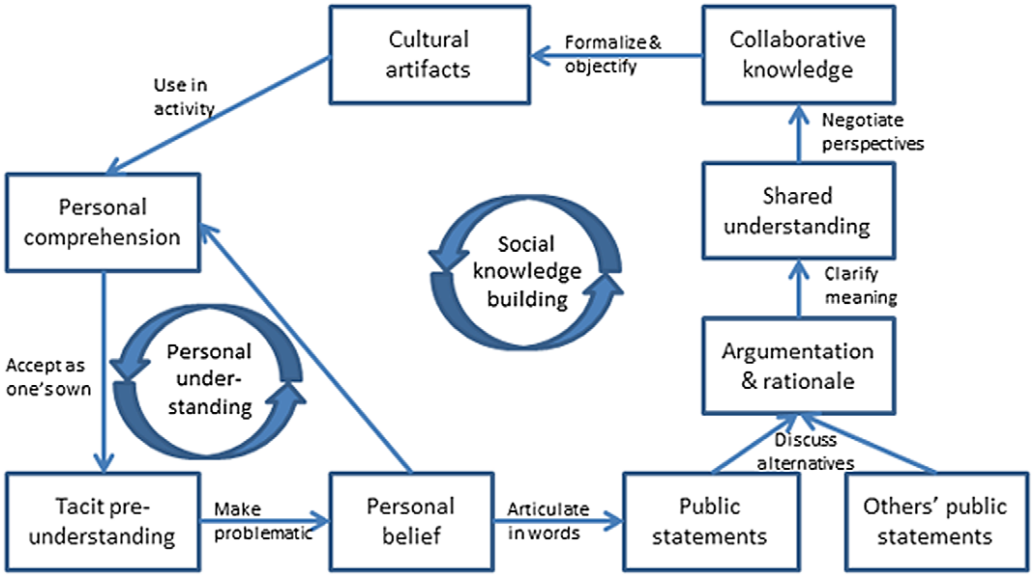

Image. 2. Diagram of Stahl's (2000) knowledge-building processes (Sormunen, E., Tanni, M., Alamettälä, T. & Heinström, J., 2014).

Educators can encourage knowledge-building through creating opportunities for students to engage in collaborative creation of artifacts; to strive toward "improving ideas" rather than adopting "pre-existing truths"; to advance knowledge through solving problems rather than learning topics; to engage in discourse to enhance learning to progress, to seek common understanding, and to expand the base of accepted facts; and to use first-hand experiences, secondary sources, and authoritative information, and judge the quality of that information (Scardamalia & Bereiter, 2006).

Designing For Authentic Collaborative Experiences

Educators make decisions everyday--from the first moments of creating a syllabus to determining how much time should be spent on individual to collaborative assignments. These decisions are based not only on district or state standards, time constraints and their student population from semester to semester, but are also based on their philosophy of learning, teaching, and schooling. Garcia (2014) argues that teachers in today's globally and

technologically connected communities are environmental designers, crafting "the educational ecosystems in which we mutually learn and build with students during the hours of 9 to 5" (p. 7). As educators continue to design this time to best prepare students for the future, they will need to continually focus on collaborative skills as they are essential for anyone participating in today's highly technological and global society as the creation of new ideas and artifacts rely not on individual pursuits, but on collaboration (Stahl, 2006). In order for students to truly benefit from working with peers, collaborative experiences must require students to solve authentic problems that cannot be solved individually. And while there are numerous methods for improving collaborative experiences from assigning roles to each member of the group or attaching grades to group participation, these methods are not enough to inspire collaboration if students do not see the need to work together. Assignments that can easily be completed alone make group work feel unnecessary.

While constructionists champion learning as active discovery, most agree that this does not happen without intentional design and guidance (Kafai, Peppler, & Chapman, 2009; Brown et al., 1997). Successful collaborative experiences begin by creating communities which build on individual responsibility combined with communal sharing; respect among students, teachers, school staff; a community discourse, and ritual (Brown et al., 1997).

Video Creation as Collaborative Representational Process

Collaborative learning is built on the understanding that intelligence is not a static state of being, but rather built through moments of interaction (Pea, 199). In film courses, students are often given several moments to interact with their peers. From the first moments when students come up with the idea for a film, pitch their ideas to their peers, talk to their peers about their work, and gain feedback throughout the process, students are therefore given numerous

opportunities to build relationships between their previous and new knowledge (Kafai, 2006; Kafai & Resnick, 1996). They collaboratively develop and revise concepts for stories, discuss and implement artistic decisions, and incorporate image, sound, and text and ensure that their message is comprehensible for a range of viewers. It is through this act of dialogue and problem solving that students construct knowledge (Pea, 1997; Vygostky, 1978).

In the video production classroom, student work is centered around creating an artifact--a film--meant for sharing with an outside audience. For constructionists, the process of creating an external artifact that demonstrates mastery is often seen as evidence of learning. This process is not discipline specific and regularly takes place in the disciplines of science and math (Halverson, 2013). However, in creative disciplines such as art, Halverson (2013) argues that the creation of representations requires scaffolded instruction. Specifically, she found that the student creation of external representations was scaffolded through a series of formal and informal assignment tasks. Halverson and Gibbons (2009) defined these as "key moments" in video production: application, pitch, shooting script, editing, and public presentation. In each of these moments, students not only create, but actively construct knowledge while interacting with their peers (Pea, 1997; Vygostky, 1978).

For video producers, these moments of social interactions are driven through the use of tools such as cameras and video editing software which can also extend human cognition (Stahl, Foot, & Nardi, 2006). Papert (1980) called these tools, such as a video camera or a computer, "objects to think with" arguing that physical tools help learners construct and revise connections between old and new knowledge (Kafai, 2006). Tools such as iMovie, Windows Movie Maker, and Garageband play an integral role in communicating one's ideas and meaning making (Gilje, 2011). The tools help create learning, transform how people think and how people make sense of

the visual, and, in turn, the user shapes these tools (Gilje, 2011). Editing software actually structures how users think about a medium (Sefton-Green; 2005; Gilje, 2011). As youth compose in these platforms, they use software to create visual representations of their work creating an interactive composing process that allows individuals the possibility to transcend beyond each medium that they used (Ranker, 2008). Meaning making is literally made possible through software (Gilje, 2011). There are certainly suggested ways to use video editing software, but producers adapt and make them their own for their own specific purpose and context.

Video Production For Authentic Collaboration

Through this article, I use an ecological perspective to demonstrate that understanding the place, people, technologies, and activities in a classroom can provide a more thorough understanding of collaborative video production. Although placing an activity or technology--such as video production--into any environment is not enough to automatically create authentic collaboration, I argue that video production does create problem-based experiences where students navigate group dynamics and use new technologies to create representations of their learning. Therefore, video production--in addition to a broader focus on creating a collaborative environment--may help educators create learning experiences similar to the authentic collaborative experiences they find outside of school.

Method & Site selections

To conceptualize collaboration in the video production classroom, I conducted an instrumental, qualitative case study (Stake, 2000) in three educational sites which have a program specifically focused on video production for youth ages 14-18, grades 9-12. I chose these three sites because the educators, Amanda, Bruno, and Andy, have been recognized for their innovative video production courses. As such, they do not necessarily reflect that which is

typical, but that which is possible as we learn more about the phenomenon itself (Stake, 2000). This approach is helpful in re-envisioning classroom processes as we can begin building a base through modelling current practices from innovative practitioners.

Overview of Three Video Production Classrooms

All three educators in this study--Amanda, Bruno, and Andy--designed their classrooms to be flexible environments where students could collaborate and move freely around the school. They encouraged students to collaborate even when assigned individual video projects. Students could help one another film, serve as an actor, and help each other edit their videos. From assignment creation to the processes embedded into the classroom, Amanda, Bruno, and Andy designed for collaborative and distributed learning to take place. The collaborative design greatly influenced the extent to which students interacted and learned from one another. While the classroom practices and physical spaces may not be typical, they serve to demonstrate what is possible in the video production classroom. Table 1 details the names of the school, the course title, teacher, and a brief course description. I follow this table with a short description of the larger context of each site including details of the school, teacher, and courses. A thorough description of classroom, educator, educator's philosophy on collaboration, and details about the courses are included in the findings section of this article.

Site	**Course Title**	**Teacher**	**Course Description**
Horizons Arts Charter School	Cinematic Language	Bruno	Introduction to video production and cinema for students in grades 9-12 in a public charter school.
Bartell High School East	Digital Journalism	Amanda	Elective English course for juniors and seniors at a public high school in a large suburb. Course focuses on digital journalism.

Jefferson Community School	Video Production	Andy	Quarter long, elective course at a small, project based community school with just over 100 students in grades 9-12.

Table 1. Course description of three research sites

Bruno's Cinematic Language Course

Bruno teaches English, film, and drama at Horizon Arts Charter School, a small project-based, public charter school focused on artistic production. At Horizon Arts, students are taught how to talk to one another about their work and participate in purposeful discourse using Harvard's Visible Thinking--routines meant to guide student thinking structure classroom discourse (Visible Thinking, n.d.). As a result, students are extremely comfortable working together, talking to one another, challenging one another's ideas, and asking their peers for feedback. Like all of the educators at Horizon Arts, Bruno regularly integrated the thinking routines and collaboration into his classroom practices.

Bruno's Cinematic Language Course serves as an introduction to filmmaking with an emphasis on creative production. Upon entering, students have various levels of experience with video, some even taking Bruno's course for a second time. Throughout the semester, students create both collaborative and individual creative movies and documentaries. Even when students are tasked with editing and producing their own films, they are encouraged to collaborate with their peers.

Amanda's Digital Journalism Course

Amanda is a high school English teacher at Bartell High School, a high-achieving public school in a large suburb. In Amanda's Digital Journalism course, students create in-depth journalistic pieces and weekly video announcements. Students enter Amanda's semester long

class with a variety of experience with video and editing. Amanda's students are regularly recognized both locally and nationally for their video journalism.

Amanda's Digital Journalism course involves four major assignments. Students work collaboratively with a group of self-chosen peers for three out of the four assignments and remain in the same group for the length of the semester. The majority of the Digital Journalism course focuses on the creation of weekly video announcements. Students work in small groups for their segments and all videos are compiled with the reading of school announcements into one larger video that is disseminated across the school and shown during homeroom once a week.

Andy's Video Production Course

Andy teaches Video Production at Jefferson Community School, a small, project based public charter school with just over 100 students in grades 9-12. Jefferson Community School, is a school dedicated to personalized, democratic, and place-based education. The small community of less than 100 students is based on continual feedback and community building. Andy's Video Production course is a quarter long, elective course with students ranging from seniors to freshmen and ability levels vary from novice to expert levels of video production. The course serves as an introduction to video production including story creation, acting, filming, and editing. In Andy's class, students were regularly assigned solo films but were encouraged to collaborate during the filming process. By the end of the semester, collaboration had become common production practice to the point that each student was regularly participating in two to three films at a time in addition to their own.

Data Collection

I worked as a participant observer in these three video production classrooms for the length of at least one video production cycle as youth proposed ideas for their videos, storyboarded their projects, shot video, edited their projects, participated in critique, and revised and viewed their final product. The length of the cycles varied, but all three sites had clear production stages including pre-production, production, and post production stages (Jocson, 2012). I composed ethnographic field notes while focusing on observations of one collaborative group per class. When possible, I video and audio recorded critique and feedback sessions as critique can serve as evidence of learning in digital video production (Soep, 2006). I conducted semi-structured interviews with two youth participants. Specifically, I interviewed two students from Bruno's Cinematic Language Course after they produced their film, "Anxiety" to find out more about their collaborative production process. I regularly conversed with the three educators about their practices, their assignments, and their educational philosophy and completed semi-structured interviews with all three educators. Additionally, I collected artifacts throughout production including peer review sheets and rubrics, post production reflections, as well as the rough and final cuts of videos. Table 2 details the specific data sources for each classroom and for each video project.

Research Questions	**Data Sources**		
What models do educators use to promote	**Bruno's Cinematic Language Course**	**Amanda's Digital Journalism Course**	**Andy's Video Production Course**

collaborative video production?	Ethnographic Field Notes (8 days of observation) Artifacts (rubrics) Video of classroom collaborative practices Ongoing conversations with teacher Email correspondence with teacher about collaboration (1)	Ethnographic Field Notes (22 days of observation) Artifacts (rubrics) Ongoing conversations with teacher Audio recorded interview with teacher about collaboration (1)	Ethnographic Field Notes (9 days of observation) Artifacts (assignment sheets/ rubrics) Audio recorded interview with teacher about collaboration (1)
What does collaborative video production afford learners?	**"Anxiety"**	**"Snack of the Week"**	**"Showdown"**
	Ethnographic Field Notes (8 days of observation) Video recorded interviews with students (2) Rough cut and final cut of video (2) Video recording of critique session with rough cut of video (1)	Ethnographic Field Notes (22 days of observation) Final Videos (5)	Ethnographic Field Notes (9 days of observation) Video recording of filming process (2) Post-production reflection from director (1) Final video (1)

Table 2. Data sources used to answer research questions.

Data analysis

To answer my first research question, what models do educators use to promote collaborative video production, I first analyzed field notes and interviews from each classroom using descriptive coding to locate moments of collaboration. This included codes for group activities; classroom discussions; formalized and informal moments of peers working together. I explored how educators managed their classroom, talked about collaboration, assignments they created, and ways that they encouraged collaboration.

To answer my second research question, what does collaborative video production afford learners, I used deductive codes from Jenkins et al.'s (2007) list of new media skills including play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking, and negotiation. I used process codes for types of collaborative actions and roles students played throughout production and traced individual students' roles throughout production noting where their roles shifted. I employed artifact analysis to determine how the content of the videos shifted based on collaborative decision making. Finally, I created a matrix display (Miles, Huberman, & Saldana, 2014) to determine where and when group roles and participatory actions were found across the three sites.

Research Questions	**Data**	**Data Analysis**
What models do educators use to promote collaborative video production?	Ethnographic Field Notes Interviews with educators	Descriptive coding of classroom collaborative activities Descriptive coding for types of collaboration
What does collaborative video production afford learners?	Ethnographic Field Notes Video recordings of small group conversations Interviews with students	Deductive codes for new media skill (Jenkins et al., 2007) Process coding for and types of collaborative moves Artifact analysis of video and small group conversation to follow how ideas converged Process coding for actions of students played during collaborative production; tracing roles and shifting roles throughout Matrix display (Miles, Huberman, & Saldana, 2014) to determine which roles and participatory actions were found in which collaborative model

Table 3. Research questions and analysis methods

Limitations

Through analyzing the available data, I realized that understanding collaboration could not be adequately understood without taking a larger, ecological perspective. Although I spent significant time in each of the three sites, analyzing each site from an ecological approach would take additional data collection in order to understand more about the school itself from the administrators and students. Fully understanding each of the teacher's motivations and philosophy would also require in depth biographical interviews. As such, the following sections are built on the available data with recognition that additional information is needed to provide a full account of how educators may design for similar experiences. In future studies, I will expand this work by taking a broader approach to data collection toward learning ecologies.

Findings

This article explores two connected questions about the pedagogical models of collaboration and the affordances of those models for learners. I begin this section by describing the context for each collaborative video assignment as I found that it is necessary to approach collaboration from an ecological perspective--understanding the place, people, and technology in connection with the activity (Caldwell et al., 2012). Next, I examine the two connected research questions which informed this work. My first research question--what models do educators use to promote collaborative video production--examines what pedagogical choices teachers make to encourage collaborative video production. Through observing three video production classrooms, I found three different collaborative models: semester long production groups, project specific collaborative groups, and solo projects with collaborative production. Each of these models afforded different opportunities for learners. As such, my second research question--what does collaborative video production afford learners--builds off of my first research

question. I present one group project from each classroom to demonstrate what video production afforded learners in each of the three collaborative models.

Collaborative Learning Ecologies

In this section I describe each educator's philosophy of collaboration and detail the multiple, related elements that created the context for collaboration in each environment. This broad approach is necessary in understanding collaboration on a larger scale as classroom collaboration is not created over a single moment, but built through an extended amount of time with numerous seen and unseen factors. From the first days of the semester onward, educators spend time creating a welcoming community and teaching students about how to participate when working with their peers in collaborative groups. Understanding these pedagogical practices and beliefs creates a full picture of how educators promote collaboration in their classrooms. The educators in this study regularly designed opportunities for students to collaborate with their peers. Even when videos were assigned as solo projects, students were encouraged to partner with peers to help film or act in one another's films. In this way, collaboration was integrated into the *ethos* of the classrooms.

Bruno's Guiding Philosophy of Collaboration

Bruno is an educator, an actor, and a playwright who works at Horizon Arts Charter School, a project based public charter school that focuses on artistic production and presentation. The mission of the school, to "empower people to think critically, engage creatively, and establish strong human connection in order to cultivate the next generation of changemakers" comes through in each of the classrooms which champion collaboration. At Horizon Arts, students are taught how to talk to one another about their work and participate in purposeful discourse using Harvard's Visible Thinking--routines meant to guide student thinking structure

classroom discourse (Visible Thinking, n.d.). As a result, students are extremely comfortable working together, talking to one another, challenging one another's ideas, and asking their peers for feedback. Like all of the educators at Horizon Arts, Bruno regularly integrated the thinking routines and collaboration into his classroom practices.

Bruno teaches English, film, and drama. His Cinematic Language Course serves as an introduction to filmmaking. Upon entering, students have a variety of experience levels with video, some even taking Bruno's course for a second time. The course serves as an introduction to film creation with an emphasis on creative production. Students regularly critique outside films and their peers' films to improve their practice and engage in improv to work on their acting skills. Throughout the semester, students create both collaborative and individual creative movies and documentaries. Even when students are tasked with editing and producing their own films, they are encouraged to collaborate with their peers. Bruno's classroom was inline with the school's mission in this way:

> our school always has a strong emphasis on collaboration, because it builds community while preparing them for future life experiences...the reality is that we need other people, and there will always be other people. There are very few career paths out there that allow for isolation, and even those inevitably require some human interaction anyway. As far as community building, we want students to look forward to coming to school in the morning, and the best way to do that is to make sure that they have positive relationships with the people around them. Not every collaboration goes well, but we can at least reflect on what worked well and what didn't in order to make the next collaboration more successful (email correspondence, February 24, 2020).

Project Specific Production Groups. Bruno assigns three major video assignments each semester (see Table 4).

Assignments	**Collaborative Production Design**
Video Diaries	Solo project; students paired up to help taking turns to film and act in the film
Remake Video	Groups of 2-4
"Tell It In Images"	Groups of 3-5

Table 4. Collaborative video production assignments in Bruno's course.

Students in Bruno's Cinematic Language course are always encouraged to collaborate, even when they work on individual assignments. Whether helping a peer film by holding a camera, providing feedback, or serving as an additional actor, collaboration is embedded into the classroom code of conduct as Bruno believes collaboration is an essential component of video production. He explained that

> Film/video (and drama generally) are communal processes. It's incredibly difficult to make a video happen without a team. There are natural roles that are needed and connect with different skill sets. Verbal/linguistic students can be tapped to write scripts. Visual students can storyboard and usually edit. Kinesthetic or verbal students are needed as actors. It's a great way to show that different types of people can contribute meaningfully to a project and can even complement their teammates with skills that might otherwise be missing (email correspondence, February 24, 2020).

In terms of individual assignments, while the first assignment is an individual project--students come up with the idea for the video and edit their own video--students are encouraged to pair up to film so they can take turns acting and holding the iPads. After students have the

experience of editing and directing their own film, gaining necessary skills to bring to their teams, they are placed in collaborative groups for the second and third videos.

Amanda's Digital Journalism Course

Amanda is a high school English teacher at Bartell High School, a high-achieving public school in a large suburb. Recognized in national rankings for being in the Washington Post's list of "America's Most Challenging High Schools" and as one of the top 25 high schools in the state, Bartell High School is a diverse school of just over 1,000 students. The school's philosophy is built on the belief that relationships are at the core of the success of our students, teachers, and administrators.

When Amanda took on the Digital Journalism course, an elective English course, the course rarely had enough students enrolled for the class to continue. However, through the creation of the Weekly Video Announcements, Amanda's class has expanded into two sections and she regularly has a waiting list of students trying to gain access into her class each semester.

Amanda's Digital Journalism course involves four major assignments. Students work collaboratively with a group of self-chosen peers for three out of the four assignments and remain in the same group for the length of the semester (see Table 5 for a full list of assignments). Some students work with their friends, while other groups merge based on necessity.

Assignments	**Collaborative Production Design**
"Letters to the Next President"	Group of 3-4 who work together all semester
Video Announcements	Groups of 3-4 who work together all semester
"Brief But Spectacular"	Group of 3-4 who work together all semester

"This is My Life"	Solo project

Table 5. Collaborative video production assignments in Amanda's course.

The majority of the Digital Journalism course focuses on the creation of weekly video announcements. While the video announcements include content often found in school announcements such as the reading of upcoming school events and a lunch menu, the real focus is on the student created weekly segments which resemble a mixture of popular YouTube sensations (anything from Unpacking videos to pranks) and Saturday Night Live skits. At the start of the semester, students work in groups to come up with a segment theme and create the opening video for their titled segment. During the semester I spent in Amanda's classroom, titles ranged from the "After-School Adventures" which featured students who did adventurous and courageous after school activities not found in school to the "Nerdy Genius" which explored issues high school students face with witty advice from a Nerdy Genius. Each couple of weeks, groups of students submit their video segments to Amanda, the producer, to hopefully have their piece featured in the video announcements. While students work in small groups for their segments, all videos are compiled with the reading of school announcements into one larger video that is disseminated across the school and shown during homeroom once a week.

Amanda's Philosophy of Collaboration and Semester Long Production Groups.

Amanda's teaching is grounded in interest-based and project-based learning. She wants the course to belong to students, for them to feel ownership over the content, the structure, and the environment. As a result, she provides them much autonomy and trust. During class time, students can move freely throughout the school to film and can decide when and where they want to work. Amanda believes that a project- based curriculum is essential for learning and

therefore set up the video classroom to allow for students to work toward larger, collaborative projects.

In Amanda's class, students work together in a group of three to four for the entire semester. Part of this design is built on practicality. Amanda explained her motivation for creating semester long groups based both on practicality and pedagogy. In terms of practicality, she mentioned that

> so much of the work happens outside of class in terms of filming on location, they need the consistency of work schedules, the familiarity they have with one another to make sure that they can establish deadlines, and also proximity. Not everyone lives in the same location and so those were considerations for the work that's done outside of school. And so, logistically it helps that they self select and then they are consistently with one another so they are able to develop systems within their group that allows for success (interview, February 19, 2020)

Forming semester long collaborative groups also allows for creating learning communities to form. This was particularly helpful as Amanda's classroom involved students various ability and experience levels:

> I think that there's a comfort level that evolves within the group that students are willing to take risks. Some people come in with so much background experience editing and others are completely new to it that um that some of those who are new to it are really shy and timid about how to approach even just putting in a sim card into the back of the computer and so a lot of times that becomes you know just...paralyzing and so by allowing them to learn within that same group I think they're more willing to take risks (interview, February 19, 2020).

Amanda described that she believed the semester long groups allowed for the roles to shift throughout the semester whereas having students change groups can lead to students maintaining the same role from group to group. For example, someone proficient in editing can always find another group that needs an editor and this could mean that someone continuously builds on a skill of which they are already proficient rather than taking on a new role.

Andy's Guiding Philosophy of Collaboration

Andy is a teacher at Jefferson Community School, a small, project based public charter school in a small, urban community. Jefferson Community School, is a school dedicated to personalized, democratic, and place-based education. The small community of less than 100 students is based on continual feedback and community building. The school aims to be "a leader in democratic, place-based and personalized education, facilitating inspirational and authentic learning experiences that engage students, families, educators, and the community."

Andy is an educator and a game designer. He teaches a wide variety of classes from the history of film to bike mechanics. His course, Video Production, is a quarter long, elective course with students ranging from seniors to freshmen and ability levels varied from novice to expert levels of video production. The course serves as an introduction to video production including story creation, acting, filming, and editing. Table 6 provides a full list of assignments and collaborative opportunities.

Assignments	**Collaborative Production Design**
"Lumiere Brothers"	Solo project
Silent Film	Groups of 2-3 or solo project
5 Shot Film	Solo project; students joined peers to help act, record, etc. but edited solo projects

Table 6. Collaborative video production assignments in Andy's course.

Much like many studio-based environments (Hetland, Winner, Veenema, & Sheridan, 2013), Andy uses a variety of instructional techniques from mini-lectures to studio time and students all worked at their own pace. As students come to the class with a variety of background experience, Andy hopes to create an environment where students can learn from one another. He described the class as a "mixed age classroom kinda thing where you have different people: those that have a lot of experience and those that are just kinda gaining experience and having them in the same space at the same time" (interview, May 14, 2019).

Andy saw his classroom as directly linked to that of the larger school community: "There's a school wide culture and I'm trying to create a culture within the classroom. Hopefully I can give that culture in the classroom hopefully in a shorter time span." That culture, according to Brad, one of the peer mentors in Andy's class is tied to a constant cycle of feedback. Brad explained, "this is a very core part of [Jefferson Community School] is the feedback process. So we learn about this very early on. It doesn't have to be a specific class, because you are going to be giving and receiving feedback in most of the classes." To create this type of environment where students are constantly providing one another feedback and collaborating, Andy originally designed his classroom on the idea of "islands of expertise" or the recognition that students have a variety of expertise they develop out of school and at home (Crowley & Jacobs, 2002). He encouraged students to ask one another for help, to seek their peers for feedback, and to offer one another assistance using their own expertise. During the semester I spent in Andy's class, however, he formalized this process with the inclusion of two near peer mentors. Brad and Cathy, who had both previously taken Andy's class, worked as teaching assistants providing feedback, assistance, and guidance to the other students in the class.

Solo Projects with Collaborative Production. In Andy's class, students were regularly assigned solo films but were encouraged to collaborate during the filming process (see Table 6). By the end of the semester, collaboration had become common production practice to the point that each student was regularly participating in two to three films at a time in addition to their own. All students were familiar with their peers' projects and would step in with feedback, advice or to offer their services as an actor, videographer, or extra. Most often, production involved coming up with an idea for a film, pitching the story to one of the peer mentors, pooling a team of actors and videographers, filming, returning to the computer lab for editing, getting feedback on the rough cut, and then final viewing. Post-production time was also highly collaborative. It was common for students to get up from their project to walk around and look at their peers' work, to sit down and ask questions or provide suggestions. Students in close proximity offered one another input when they heard their neighbors discussing a complication or trying to try out a new editing trick.

Affordances Of Collaborative Video Production

In the prior section I described the context of three video production classrooms including each educator's philosophy of collaboration and education. This broad approach provides necessary framing for understanding how single collaborative moments fit into a larger ecology. I am also interested in how these smaller moments within this ecology--the models used for collaborative video production--may provide opportunities for students to learn collaborative skills. I use this next section to first describe the affordances of collaborative video production models by examining one group from each classroom. I demonstrate that while all three models--semester long production groups, project specific production groups, and solo projects with collaborative production--afford learning opportunities for students, the unique attributes of each

model created different learning opportunities and therefore I examine each individually. Through analyzing all three collaborative models and tracing the path of each group, I found that collaborative video production can afford students the ability to:

- Participate in collaborative problem solving for a shared purpose
- Expand one's understanding and stretch one's mind through using new tools
- Navigate group dynamics and work as a team
- Learn from peers of various ability levels who have a shared language and understanding

To illustrate what this looks like in the classroom, I trace the conversations, production process, and group roles of one project for each classroom tying each to the skills afforded by their arrangement. I chose the three production groups because I was able to collect the most amount of artifacts from these groups and was able to observe the groups on numerous occasions making it possible to triangulate the data to create a full picture of the group dynamics. As a result, they represent but one example from the many groups from each classroom. Table 7 describes the collaborative model and the name of the film created by each group as well as the key learning opportunities witnessed in each model. This does not necessarily mean that the other skills were not present at some point in their collaboration, but that the skills marked for each reflect skills that were heightened during the specific models and present during my observations or video recordings or described in student interviews.

Course	Collaborative Model	Film Project Name	Group Description	Collaborative Problem Solving	Using new tools	Navigating Group Dynamics	Various ability levels and shared language

Cinematic Language Course	Project Specific Production Groups	"Anxiety"	Four students who were placed in a group for one assignment	X	X	X	
Digital Journalism Course	Semester Long Production Groups	"Treat of the Week"	Four students who worked together all semester			X	X
Video Production Course	Solo Projects with Collaborative Production	"Showdown"	Five students who were assigned a solo project, but were encouraged to collaborate to film.			X	X

Table 7. Three models used for video collaboration

The three films "Anxiety", "Treat of the Week", and "Showdown", were all student created films. Students in all three classrooms had creative freedom in choosing the topics for their films and were allowed to work at their own pace.

"Anxiety"

For the third video assignment in Cinematic Language, students were assigned the task of creating a 3-5 minute silent film about a topic of their choosing. Students completed initial brainstorming individually and then were assigned to groups of 3-4 to share their ideas and form the story for their film. Marty, Chris, Sigrid, and Mariah, producers of the film "Anxiety" created a film about a young character who suffered from social anxiety and was unable to leave their apartment. The film shows the character struggling to leave, confronting their own anxiety, and eventually leaving their apartment to join their friends at a party.

Participating in collaborative problem solving for a shared purpose. Even from the first moments when Marty, Chris, Sigrid, and Mariah formed a group they were engaged in problem

solving. Much of this is based on the brainstorming activity Bruno assigned which required students to first brainstorm individually, share their ideas with their peers, and then to use ideas from each member to create their film. For the brainstorming activity "Color, Symbol, Image" each student wrote down a color, symbol, and image they would like to see in the film and a rationale for their choices. Students were then assigned to a group of three or four and were tasked with coming up with an idea for a film that incorporated at least one idea from each student.

Marty, one of the producers, described the process:

> A lot of the beginning was really difficult because we had all made these sheets where it was like a color you wanted to see, a symbol, and an image...And we all had completely different things and it was just hard to just smash it into a narrative that worked because one of the criterias for the film was that we had to all have something that we like personally wanted in the film...When we were all put together we all had completely different ideas. I wanted to do something kinda like crazy and abstract and weird. I wanted to have like wild music playing and I just really wanted to let loose with it and just do something not serious. But a lot of the other students wanted to do something a little more serious, so we ended up just talking about the things we wanted to see in our film...so we kinda just shoved all of our ideas together and created this idea of someone with social anxiety trying to leave (interview, January 28, 2019).

The pre-production process continued to be a series of compromises and negotiations as they worked to combine all of their individual ideas into a collaborative video. Marty, Chris, Sigrid, and Mariah came together with three symbols they wanted to see in their film: clashing swords to show conflict; an empty chair to demonstrate loneliness; and gears turning to show the

passing of time. The first problem they had to solve was what symbols, images, and colors to use and how to include at least one idea from each person. Marty described this as a difficult task: "figuring out the technicalities in the beginning was difficult, but we just talked it out as much as we could. We used a logic like we're going to be in a school so swords isn't gonna work, we'll figure out a way to meld that into our story and have it work" (interview, January 28, 2019).

They also struggled to find ways to include other symbols in their story. Chris, who originally had the idea of using gears to show the passing of time realized that they could create the same message with the use of keys rather than gears. Marty reflected that it was Chris "who came up with the idea and he was the one who wanted to see keys turning on a ring because uh he was the one who wanted the gears turning, but when we talked about like the type of film we had he was like 'oh we can turn the gears in the keys that were turning!'" (interview, January 28, 2019). The keys ended up serving two purposes: the keys could both replace the gears in showing the passing of time and they could have two keys clashing to replace the idea of the swords clashing.

They then had to solve another problem. One of the students really wanted to see an image of a bad character standing behind a good character. However, when they formed their group only one student agreed to act in the film. So, they had to determine a way to create this visual using only one actor. Only having one actor also shaped the idea for their story: if they used an internal conflict they could get by with using just one actor. They settled on the idea of using the same actor, first dressed in white in the front as the "good" character--in this case the one who wants to escape from her anxiety--and the character in black representing her anxiety trying to hold her back. Image 3 reflects the combination of initial ideas to form new ideas.

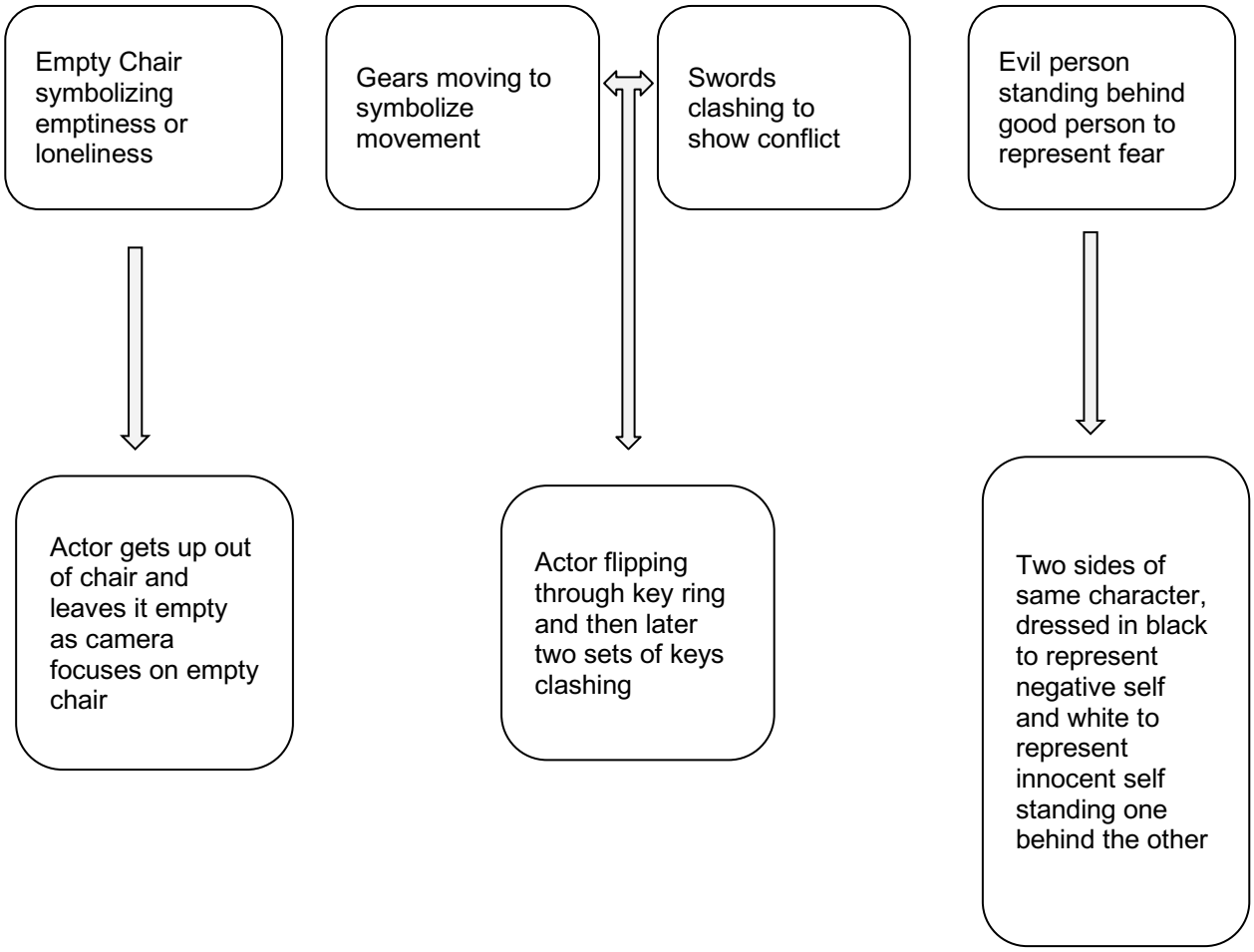

Image 3. Path of individual students' ideas combined into new, collective ideas

Although their images and symbols were altered through the process of making, the requirement to use each individual person's ideas inspired the group talked through their film, negotiated, remixed, and re-visioned what their film could look like, using many of the same skills that are regularly practiced through participatory cultures. Because each person brainstormed ideas prior to forming the group, they had equal weight in forming the basis of their story. They had to pool these initial ideas together for the purpose of shared knowledge creation.

Using new tools to expand understanding. When the group moved from planning into the production stage they were faced with another complication. Marty, Chris, Sigrid, and Mariah set out with inspirational goals of overlapping two videos in order to see the same character directly behind the other character simultaneously. To do this, they had to film the actor first in front wearing all white and then a second time directly to the side all in black. It was a task they'd never attempted before. Chris explained

> I remember being at the start of making this all of us being like "are we going to be able to do that? How are we going to be able to do that?" Because it was something we had never seen done in a film by a student before where we make someone appear and disappear out of existence and um have them, have the same person in the same shot. Like we'd seen it in actual professional films, we just didn't know how to accomplish that (interview, January 28, 2019).

Their process included a variety of trials, revisions, and reshooting. They started by filming the actor once in front wearing all white and again in the back wearing all black, but after putting the videos into Premiere Pro they made two major realizations: 1) the backgrounds (from the setting sun to wires on the floor) were inconsistent which created a problem when they overlapped the videos and 2) because they had not used a tripod, the two films were inconsistently shaky and therefore did not match up when one was overlapped with the other. To remedy this, they had to refilm, figure out a way to stabilize their iPad without a tripod, and re-examine the set to make sure everything was consistent. They used available resources, including their teacher, Bruno, to solve the problem.

First they had to figure out how to stabilize the camera without a tripod. Working together, they used the available tools around them to create a DIY tripod: "we had to like

MacGyver a stand for the iPad. We had to wrap it to like an actual camera stand so that the camera would sit still" (interview, January 28, 2019). Next, they had to figure out how to overlap video footage to create the impression that the two characters were in the same room. For this, they sought out Bruno. Part of the issue the students ran into early on is that they were trying to complete a fairly technical editing in WeVideo, which does not allow for the same capabilities as other editing software. But because they were motivated to create a type of shot, Bruno explained that they would have to use Adobe Premiere to complete the shot. They researched how to create an overlay shot in Premiere and taught themselves how to use the tool to accomplish their sophisticated shot. Brandon explained the importance of having an expert like Bruno available for solving difficult problems and as a guide to learning new technologies: "he also gave us a little bit of help as ah needed to like make the special effects work as we wanted to know. Once we got it the first time we were like 'boom, now we know how to do it'" (interview, January 28, 2019).

Navigating Group Dynamics and Working as a Team. Although students were not assigned to designate specific roles for the project, Marty, Chris, Sigrid, and Mariah took on clear roles fairly early on in the project. Because Mariah was the only member of the group who agreed to act in the film, she became the sole actor. After the pre-production stage, Sigrid took on the role of videographer and Chris and Marty--although not explicitly stated--both viewed themselves as the director, creating some power dynamics throughout. Table 8 describes the roles of the four member production team.

	Preproduction	**Production**	**Post-production**
Marty	Co-creator	Director	Editor

Chris	Co-creator	Director	Editor
Sigrid	Co-creator	Videographer	Videographer (Refilming)
Mariah	Co-creator	Actor	Actor (Re-filming)

Table 8. Roles of four member production team

Knowing that he would miss quite a few classes, Chris told the group at the start that he didn't want to act as he knew production time would be limited. His absences also helped him approach this film differently than he had previously imagined his role as a director: "I went in with the mindset that I need to learn how to ah let the group do what it wants...it's just letting the group do what they can do to accomplish that and not being like a like…being an authoritative director versus an authoritarian director is I guess how you would put it" (interview, January 28, 2019).

Chris' notion of leadership and collaboration continued to shift throughout the project. As the group took on a fairly complex cinematographic challenge, they found they were running out of time to complete their film and this required the group had to reconfigure how they thought about collaboration. Chris explained his shifting perspective on collaboration:

> In collaboration people usually think of like the whole group together but in this case I'm talking about us dispersing for it...we prioritized getting those shots that we know we'd need to do um the editing that we didn't know how to do, so we sent two of us off to the editing room because we have like, you know, we used WeVideo mostly just for the sequence editing because we could have multiple people editing at the same time in the classroom (interview, January 28, 2019).

Chris' explanation describes how his group shifted from collaboration to cooperation in order to multitask. Knowing all of the work that would have to be completed, he recognized that his

group members would be best suited to separate momentarily in order to come back together for their shared purpose.

Marty, who also saw herself as the director, found that while in previous projects where she worked with a partner they would spend a large amount of time talking about the film and playing around, that this film taught her how "how to really get my actors to uh be serious and do what I need them to do. And I learned how to take over, but not in a rude way, which was important" (interview, January 28, 2019).

"Treat of the Week"

In Amanda's Digital Journalism course students worked in groups of 3-4 for the entire semester creating weekly video announcements. At the start of the semester, students created an idea for a segment that would be featured each week and then created individual episodes. Anastasia, Jerome, and Brad were placed in a group and came up with their segment idea "Snack of the Week" which featured different treats from the cafeteria each week. Sometimes they would have students do blind taste testing or they created challenges such as seeing how many Sour Tarts students could keep in their mouth at a time.

Learning from peers of various ability levels who have a shared language. At the start of the semester, Anastasia, Jerome, and Brad had vastly different experiences with video production and editing. Brad had years of experience creating movies and using Adobe Premiere Pro, the same editing program they used in class. Anastasia had some experience creating films and a little editing experience using iMovie. Jerome, who was also quieter than the other two students, had almost no experience in editing.

Anastasia, Jerome, and Brad struggled with assigning and distributing tasks and collaboration early in the semester. For the first two video segments, all three students took part

in coming up with the topics and going on video shoots in the cafeteria. However, when it came time to edit on February 1st, the production turned into a solo event with Brad sitting directly in front of the computer, headphones on, editing. Brad provided little description of what he was doing while editing, why he made the decisions he did, or how to complete particular tasks using Premiere. Anastasia and Jerome sat on either side of Brad without instruction or practice. Table 9 details the overt behaviors of Brad, Jerome, and Anastasia throughout the semester. Appendix A displays a more detailed description of the progression.

	February 1	March 1	March 13	April 12	April 17	May 10
Brad	Solo editing	Solo editing; asking questions and engaging group in process	Solo editing; asking questions and engaging group in process	Watching and helping when needed	Collaborative Editing	Editing; engaging group members in decision making
Jerome	Watching	Watching	Making suggestions formed as questions	Solo editing; incorporating suggestions from group members	Collaborative Editing	Offering suggestions, making collaborative decisions
Anastasia	Watching	Starts asking questions and making suggestions	Asking Jerome questions, demanding his collaboration	Watching and making suggestions	Absent	Offering suggestions, making collaborative decisions

Table 9. Overt behaviors of group members

Throughout the semester, Jerome moved slowly from watching Brad edit to eventually collaboratively editing and making suggestions for improvement. In the first instance when Brad started making suggestions on March 13th, his suggestions were stated in the form of questions. For example, in this first instance of Jerome participating in editing he asked “How about that shot…it’s good?” and “We should include a song. What song would like set the mood?” These

first examples of Jerome actively participating in the decision process mark a shift in Jerome's participation from a passively watching to taking a more active role in the production and editing process. On April 17th, Jerome and Brad collaboratively edited. Without access to splitters for their headphones, the two sat side by side, passing the headphones back and forth, editing and viewing one another's work. By the end of the semester, although Brad sat in front of the computer editing, Jerome provided suggestions and talked with his two peers throughout the process making collaborative decisions.

While Jerome's behaviors are the most obvious to trace as he started off in a very passive role and novice video producer, Brad's role shifted throughout the semester as well as he incorporated his group members in asking questions to engage them in the production, co-editing with Jerome, and helping his group members improve upon their own editing skills. Brad's path, as someone who came in with editing experience, shifted in how he worked with his group members. At the start of the semester, his actions reflected more cooperation--the kind we see when students complete part of an assignment and compile their work and turn it in. He knew how to edit and so he did the work so they could finish the project. And throughout the semester, he worked with Anastasia and Jerome in different, collaborative ways even helping Jerome take on new skills.

Anastasia's trajectory remained fairly constant throughout the semester both in the amount of editing and her ability to work collaboratively with her group members. It is also worth noting that Anastasia was absent on the day when Brad and Jerome worked collaboratively through the editing process. Throughout the semester, she often tried to persuade Jerome to participate by asking him questions and often let him know that she thought he should be doing

more for the group. Often, Jerome would respond by then trying to participate or add in suggestions and his additions were not always taken into account.

Amanda, reflecting on the drawbacks of semester long groups for students like Anastasia commented that

> I think a drawback is that sometimes...the kids don't always get their hands on the computer. They are always giving direction instead of editing, but one thing I've been trying to be more cognizant of is seeing those roles and saying okay...the next time it has to be edited by someone new in the group so then that editing has been passed on then...Once they start their segments for the video announcements, those roles always become somewhat more formalized in groups and then once I see that I start requiring a new editor or someone else holding the camera, someone else asking interview questions. And so it is also a nice way to move the roles around within any one group (interview, February 19, 2020).

Much like collaborative groups themselves, Amanda constantly adapts and shifts requirements based on the needs and actions of her students. Something that seems fixed--such as a group of students tasked with working together for the length of the semester--is also ever-shifting and changing. Teachers are integral in collaboration beyond creating groups and assignments; like Amanda, they must keep a cognizant eye on how those groups are functioning to ensure that each student is an active member of the group knowledge building process.

"Showdown"

In Andy's Video Production class, students worked on individual projects, but were encouraged to collaborate on their peers' films during the filming stage. Students could help their peers by acting in their film, filming, giving feedback, or adding in ideas for their stories.

"Showdown" was a film created by Elijah about a young kid who is bullied in school by a "big scary guy." The film involves a second character who approaches to help, eventually beats up the bully, and returns stolen lunch money back to the kid.

Navigating group dynamics. In Andy's class, students regularly worked both on their film and helped their peers simultaneously. They would leave their editing behind to help a peer who needed someone to act or perform a stunt in their film or put down their camera to pick up their peer's camera and help them with their filming. While Table 10 details the students who participated in "Showdown," it is also representative of the typical production in Andy's class.

	Pre-production	**Production**	**Post-Production**
Elijah	Composed story, pitched idea, and sought out actors	Videographer and Director	Individual editing and final film production
Isaiah	N/A	Actor: Hero who gets beat up and saves "dweeb"	N/A (Worked on his own video project)
Brandon	N/A	Actor: Bully	Individual editing and final film production using footage
Marcus	N/A	Actor: "Dweeb" who gets beat up	N/A (Worked on his own video project)

Table 10. Student roles in the film "Showdown"

Similar to many productions in Andy's class, Elijah came up with an idea for a film, talked to his peers about it and they pitched in to create the film. So while Elijah came up with the idea of the film, directed the film, and edited the film, three other students also participated mostly by acting in the film while also working on their own film.

Although it was Andy's hope that students would collaborate and work together, the amount to which students started working on one another's projects surprised Andy. Andy reflected on this saying that the experience was

> an interesting one for me because there were some students who were not completing projects but they were helping other people, but…I don't know exactly what happened in that case. That made me also like that is just another trajectory. And for me I have to like let go and say this is for the students and their learning and what they're choosing to do and what paths they want to take…I'm gonna keep pushing you and at some point I kinda try to step back as best as possible (interview, May 14, 2019).

As each student had their own film to produce, they served as the director and lead decision maker for their film. Elijah reflected on taking on this role of directing in a post reflection writing "I learned that the hardest part of making a film is the actual filming. It was difficult to nail the Jello to the tree - getting everyone to do what I wanted them to." Throughout the filming process, Elijah performed multiple tasks to ensure he captured footage he could use:

- Directing actions and stage directions
- Filming and setting up shots
- Deciding when scenes needed to be refilmed
- Envisioning each scene and describing vision for others to understand
- Telling his actors when they did something wrong and complimenting when they did something right

Simultaneously, when students joined in their peers' films they became actors, assistants, and videographers, taking directions from the lead. In this way, students had to be flexible in learning when to take on different roles for the various film productions.

Using new tools to expand understanding. Although students collaborated during the filming stage, they were required to edit their own film. Andy wanted to make sure that each student gained experience with this stage of the process--using the available tools and technology

to create a cohesive story. “Showdown” was unique in that both Elijah who came up with the story and Brandon, one of the actors both decided to edit the same footage to create their own film. They could not edit together as it was a required part of the assignment that they did this individually, yet they sat only a couple of computers apart editing the same footage. They were both able to take the same footage and imagine their own vision for piecing it together using the available technology.

Learning from peers of various ability levels who have a shared language. The editing stage was highly collaborative in Andy’s class. It was not uncommon for students to get up from their project to walk around and look at their peers’ work, to sit down and ask questions or provide suggestions. Students in close proximity offered one another input when they heard their neighbors discussing a complication or trying to try out a new editing trick.

Andy’s class was also unique in that there were two peer mentors--students who had previously taken the class--who were always available to provide feedback or assist students in using editing software. Elijah took advantage of these opportunities to talk to his peers about his work. During the two days that Elijah edited “Showdown” he asked for feedback and engaged in discussion about his work with one of the peer mentors, one nearby peer, his teacher, Andy, and one of the resource teachers assigned to the class. In doing so, he received feedback from four people with very different experience levels and expertise--two who are of the same or near ages and two teachers--one who has quite a bit of video experience and one who had little video experience.

Discussion

The data in this article details three related areas: an analysis of the ecological factors involved in classroom collaboration, the affordances of specific collaborative models, and the

affordances of each model for learners. In this section, I first explain why an ecological examination is necessary for understanding smaller moments of collaborative learning. Next, I describe the affordances of each collaborative model. In the final section, I describe the skills students can gain from the three collaborative video production models.

Understanding Collaboration from an Ecological Perspective

Through examining the philosophy and pedagogical practices of these three teachers, it became clear that the small moments of collaboration--even the ones that took place for the length of an entire production process--were not instances of a stand alone phenomenon. They are all part of a much larger collaborative ecology both in the classrooms themselves and are also part of a larger, collegial community found at the school level. These moments were also highly impacted by each educator's philosophy, pedagogical practices, and students' previous experiences and interests. Andy's students, for example, entered his class with a variety of experience in video production but all with a desire to learn the content. The varied levels of experiences and Andy's focus on creating an learning environment built on "islands of expertise" (Crowley & Jacobs, 2002) created a culture where students were encouraged to learn from one another and to seek out peers with varied experiences and expertise over relying on an educator as the sole expert. For many students, this was a new way to think about learning and Andy worked each day to guide students to look to their peers for assistance. Taking a broad approach to understanding collaboration is essential as it is not created over a single moment, but built through an extended amount of time. Each day Andy opened up opportunities for his students to work together and to see how they might benefit from the expertise of each individual in the classroom. This is an important recognition for educators and teacher educators in thinking about designing for collaborative learning.

Collaborative learning is hardly a new concept. Educators have created lessons that include peer to peer learning opportunities in their classrooms for generations. A point that is often overlooked, however, is how the larger learning ecology is ever-connected with those single moments of collaboration. Each single collaborative task can be more or less successful in promoting learning depending on factors such as how the teacher has shaped the environment up to that moment. The three models of collaboration in this article, for example, may not have the same results if they are implemented in a different classroom. They are models nested in each educator's beliefs about education which influenced how they designed their classroom. Their classrooms were equally influenced by the larger school philosophy, by the students who entered the classroom, and the technologies available to them. At Horizon Arts where Bruno teaches his Cinematic Language course, the philosophy of collaboration is built into the pedagogical structure of the school through project-based learning and through the school's adoption of Harvard's Visible Thinking routines (Visible Thinking, n.d.) which creates a schoolwide focus on productive discourse practices. From the first days of school, students practice talking and thinking with their peers and mentors to further advance their own thinking. Bruno adds to these larger scale pedagogical frameworks in creating numerous moments for students to collaborate throughout each class period from collaborative video production assignments to innovative critique sessions for students to assess and provide feedback to their peers. Taken together, each of these decisions and practices create a large, ever-connected ecology that impacts learning.

While taking this broad approach may make designing authentic collaboration opportunities feel daunting, I hope instead that it demonstrates that collaboration is not something that simply takes place through group work. It is instead built on a comprehensive

approach to educational design and then built into individual moments of collaboration. These moments, I argue, can be heightened through video production.

Affordances of Three Collaborative Video Production Models

Although the educators in this study approached collaboration quite differently, each model created affordances for learners. Project specific production groups allowed students to gain and continuously adapt and improve upon their group navigation skills, to regularly participate in group problem solving practices, and learn from the expertise of a variety of peers. Semester long production groups allowed students to build a group identity, to gain skills needed to navigate complicated, ongoing group dynamics, and to gain media skills through peer interactions. Solo projects with encouraged collaboration opened up the classroom to interest based collaborations helping students more easily transfer their online learning approaches to the classroom.

Affordances of Project Specific Collaboration

Assigning students to different collaborative groups for each assignment created regular practice in negotiating roles and forced students to quickly parse out roles so they could accomplish their tasks in a timely manner. Each time students were placed in a new group they could take what they learned from their previous group and apply this to their new group, learning each time about how to best navigate group dynamics. Bruno, reflecting on his own experience working with a group when he was in high school, said that he felt frustrated:

> none of us seemed to know how to make the collaboration happen, and that nobody had really ever expected me to work with a group of strangers before in my education. I want my students to avoid having that sort of problem. By collaborating frequently, they can have some bad experiences, but also figure out

> how to work through them in the future. They'll know what to do if it seems like someone isn't pulling their own weight. Hopefully they'll also know how to prevent any issues like that from the start (email correspondence, February 24, 2020).

Unlike the semester long projects where students worked with the same group members, the project specific collaborations allowed each group to function differently and for students to constantly try out new approaches to collaboration.

Because students worked with different peers for each project they had to make these decisions about group dynamics quickly and this often led to them quickly choosing roles to fulfill as they came to recognize that to accomplish their task they needed to each play a significant role. Unlike assignments where students can easily split up group work and complete tasks separately, students had to work collaboratively through a shared building of knowledge (Roschelle & Teasley, 1995; Stahl, Koschmann, & Suthers, 2006).

Finally, as students worked with teams for each assignment, they had the opportunity to learn from the expertise and experiences of different students throughout the semester while also improving upon their individual expertise. When students work with different students for each project, their personal understanding is constantly expanding with each new social building process. To each new group experience, they bring an understanding built from their previous group experience, revise and build a new understanding with which they enter the next experience.

Affordances of Semester Long Video Production Groups

For students like Brad, Anastasia, and Jerome, producers of “Snack of the Week” the semester long collaboration looked quite different from the start of the semester to the end of the

semester. As Brad gradually allowed his peers to take on more editing and decision making, he started to hand over the control of the editing and often worked in collaboration with Jerome. Sitting side by side, handing headphones back and forth to make joint decisions, Brad and Jerome's collaboration toward the end of the semester involved collaborative problem solving. While the team was slow in successfully navigating group dynamics, having the length of the semester to try out new tactics, to struggle and find productive solutions, Brad, Anastasia, and Jerome had to figure out how to best move forward as each day they had to return to their group members and find a way to work together.

The semester long group was particularly helpful for Jerome who entered the class as a novice video creator and editor. In the length of the semester, he had the chance to observe for an extended amount of time, to begin asking questions and making suggestions, editing with his peers as guides, and eventually editing on his own. In online and out of school spaces, young people's involvement in media often follows a path of increased active involvement which Ito et al. (2010) describe as hanging out, messing around, and geeking out. Throughout the first two stages of going online and chatting to others to experimenting and playing, young people begin to move from media consumers to media creators. For those students like Jerome who had little to no experience prior to this class, the semester long project allowed for him to spend an extended amount of time "hanging out". While Jerome's access to media outside of school is unknown, his progression throughout the semester suggests novice video and media creators may be able to experience this same shift from "hanging out" to "messing around" in a classroom environment give a flexible curriculum that allows for continual access to computers and peers who can help novice creators into those first stages of media creation.

Affordances of Solo Projects with Collaborative Production

Jefferson Community School creates an interesting study in collaboration as students were not assigned groups at all, but were encouraged to collaborate throughout the production process as needed. Andy encouraged constant collaboration as the class itself was made up of students of varying ages and video experiences. As his overarching pedagogical practice, Andy often spoke to students about learning the importance of learning from those around you. The result was an organic and natural setting more akin to online environments where students choose who they worked with and when they worked on a task. Participation in peers' work was completely interest-driven.

While some students worked together from the first stages of production, other groups formed when students caught eye of something interesting happening and inserted themselves into the production. In both situations, participation was built on a sense of reciprocity. When one student held the camera for a peer who wanted to act in their film, they then returned the favor. Recognizing that video production requires numerous people fulfilling different roles, students also found it important to give back to those who helped them. This type of reciprocity is often found in online spaces. For example, in DeviantArt where artists share and critique each other's work, participants find that being a member of the group requires not only receiving critique, but crafting critiques, pointing members to new resources, and helping them improve their practice (Manifold, 2012). For environments such as this to thrive, members collaborate not for a combined goal of a collaborative or solo project, but for the process of creating and being part of a larger community where creativity, thinking, and playing around with ideas are just as important as a final product.

There's a reason that Andy's approach and more environments mimicking participatory cultures are not often found in formal classroom settings: they are difficult to achieve. It is important to note that Andy had additional assistance in the classroom--two peer mentors--that made this all possible. Andy also set students up for success with step-by-step guides to completing their projects so that they could keep track of their individual progress while also helping their peers. Without these additional structures in place, the numerous collaborative productions occurring simultaneously could become difficult to track. Similarly, as educators want to ensure that all students have similar experiences and stay on task, this model could easily lead to students only working with their friends and for off task behaviors.

Skills Learners Gain Through Collaborative Video Production

Collaborative video production allowed young producers to gain skills that are valuable beyond the video production classroom. Students participated in collaborative problem solving for a shared purpose; expanded their understanding through the use of new tools; navigated group dynamics and worked as a team; and learned from peers of various ability levels who have a shared language and understanding. These collaborative skills are essential for young people who will need to participate in a globally collaborative world.

Participate in collaborative problem solving for a shared purpose

Video production creates numerous complications that require collective problem solving. From learning how to use technology to negotiating storylines and meaning making, student producers must vocalize their ideas, listen to their peers, try out new approaches, revise, iterate, and persevere. Including these practices in schools will help students more effectively collaborate in the type of long-distance collaboration across communities that will be necessary in their futures (Jenkins et al., 2007). Problem-based learning provides students to approach real,

authentic problems, explore potential solutions, test, reiterate, and research methods for improvement. A practice necessary for knowledge-building (Scardamalia & Bereiter, 2006), problem solving skills are required for individuals to be full participants in contemporary culture (Jenkins et al., 2007).

Expand one's understanding and stretch one's mind through using new tools

Through the use of numerous technologies, students can explore ideas, stretch their creativity, and try new approaches to express their ideas. Video production is unique in that video creators use multiple tools throughout the process all for the purpose of exploring and expressing ideas and each one of these tools allows video producers to expand upon and see their work from new directions allowing them to explore new possibilities. After initial brainstorming, the young video producers who created "Anxiety" began with the first tool, a storyboard, which allowed them to envision how their ideas might flow, what image and sounds might fit together, and to lay out a production plan. The video camera allowed them to see their vision from multiple angles, through a variety of shots, and with various filters. Editing software afforded the opportunity to create illusions and use camera tricks to achieve a look they had only imagined possible from witnessing it in the movies. Audio created new complications as they worked to find audio that added to their story and made the feeling of anxiety come alive for their audience.

While each one of these tools require new technical skills, student video producers seem to welcome the difficulty and skill building necessary to create films. There are plenty of complications and setbacks and additional problems arose throughout production. This is common in video production. Cameras run out of batteries; iPads lacking a tripod create shakey videos; and software never runs as expected. These moments create opportunities for learning and problem solving. Bruce (2009) remarks that what is most remarkable about video production

is that even though almost all students experience frustration due to equipment issues, they remain motivated to work through the frustrations sometimes even refilming the entire film from the beginning. I found this same dedication with the young video producers of "Anxiety" who were so motivated to create a complicated scene that they refilmed numerous times, worked diligently outside of class time, and taught themselves an entirely new video editing software program in order to achieve a task that was not assigned. When students are given authentic problems to solve tied to video production, they tend to persevere and try new approaches.

Navigate group dynamics and and work as a team

In all three production groups, students had to figure out how to work with their peers and take on individual roles which contributed to the larger success of the group. Much like a news room or film crew, students both took on individual roles and also had to gain an understanding of the roles of their peers. Much like video producers in the industry who work with a production team made of a film crew, screenwriter, director, lighting technician, music or sound technicians, actors, and editors, students engaging in video production learn not only about their roles, but about their peers' roles as each role is simultaneously tied to the work of others. Each person depends on and is ever connected to the work of the entire production crew.

Collaboration of this kind creates the opportunity for both individual and collective knowledge. Students like Jerome, Brad, and Anastasia, for example, had to find a way to work together so that one person was not doing all of the editing just because he had previous experience while also ensuring that the novice video editor gained new skills. This kind of collaboration after all is not about individual gains, but the "knowledge building process" (Bereiter, 2006)--the advancement of the community. And while it took the "Treat of the week" group a longer amount of time than some groups to achieve this, those individual students will be

able to take this experience to their next group project and hopefully continually refine these skills.

Learn from peers of various ability levels who have a shared language

All three classrooms benefitted from having students of various ages and experience levels who, simultaneously shared the same language. Just as research has shown that peer feedback can be more meaningful than expert feedback as they share the same problems, language, and knowledge (Cho & Macarthur, 2010), students may also more easily advance their own understandings through talking with and collaborating with peers.

In all three classrooms, students entered with varying levels of expertise and experience in video production. Some, like Jerome, had never used video editing software. Others, like Chris, took the video production class more than once so they could continue to advance their skills. While the vast differences in video experience common in many video production classrooms may feel overwhelming for educators sets up the ideal environment for authentic collaboration. As peers have a shared language and assignments, they may help scaffold the learning process for novice video producers.

Conclusion

Collaborative skills are essential for young people as they participate in a world that is highly collaborative and involved. Online, out-of-school, and in future workplaces, students are expected to participate fully in a world where co-workers may be thousands of miles away, where global collective knowledge is compiled into a single web-space, and where large-scale online social movements can change history. To participate in this environment, young people need to develop social skills through collaboration and networking (Jenkins et al., 2007). Video

production supports young people in developing these skills through authentic collaborative experiences.

The students at Jefferson Community School provide an interesting case of collaboration as they were not required or assigned to work with their peers to produce their videos. However, by the end of the semester each student was involved in so many projects that it was difficult to keep track of whose video was whose. Without being assigned to work together, they found meaningful ways to learn from and with each other. They shared knowledge, offered advice, and served as actors, directors and found places to contribute collaboratively not because they had to, but because they wanted to. Similar to participatory cultures that have low barriers for artistic expression, where members feel some degree of connection with others, and where experience is passed between members, the students at Jefferson Community School supported their peers' creations and in turn, they were supported by their peers. Even for Andy, the teacher from Jefferson Community School, the ways students collaborated across projects was perplexing. It was not part of the design of the assignment; it was not required for a grade. However, the focus of collaboration, constant peer feedback, and community is engrained in the school's philosophy and embedded throughout most of their courses. Understanding the unique ways and reasons that students collaborated in Andy's class as well as Amanda and Bruno's course therefore, is much larger than an assignment or a camera. It is built on a school's philosophy, on a teacher's training, on the decisions they make from the start of the semester, on the students that enter the classroom each semester, and upon the tools and activities used in the classroom. Video production, because it creates numerous problems to be solved and requires students to use new technologies to create representations of their learning is an ideal activity to include in a classroom dedicated to creating authentic collaborative experiences.

Appendix A

Date	Anastasia's Behavior/ Tactic	Jerome's Overt Behavior	Brad's Overt Behavior
February	Mostly watching while Brad edits, giving suggestions every now and then	Watching editing while sitting next two Brad	Driving editing process, sitting in front of computer, headphones on
Amanda approaches group for discussion about improving their segments. Afterwards, they huddled around and said "Okay, we need more content. What are we going to do?" There was a lot of reluctance to get rid of what they already have and they've spent all this time on it and there is a feeling of time crunch as they had to have it finished in one day. After they huddled, Brad said "okay, let's look at what we do have and what we want to keep." They decided to delete their prior intro and create a new intro that had images of Rice Krispies and a voiceover.			
March 6	Says she doesn't want to do voiceover as it is hard to understand her	Says he doesn't want to do voiceover because he doesn't have an exciting voice	Drives editing process, asking Anastasia and Jerome questions along the way
March 13	Anastasia and Brad go to film, come back and ask Jerome what he's done while they were gone	While Anastasia and Brad area away, Jerome sits near the computer waiting. Eventually, prompted by his teacher, Jerome starts looking up fun facts about the snack of the week, Hot Cheetos.	Anastasia and Brad go to film, come back and ask Jerome what he's done while they were gone
	While reviewing B roll, Anastasia asks Jerome several questions, urging him to participate and make decisions	After Anastasia's prompting, Jerome starts asking prompting questions to be part of the conversation	
April 12	Anastasia sits next to Jerome and offers suggestions	Complete in control of driving the mouse and making editing decisions. He had on headphones, mouse in hand, going through the entire video making cuts.	
April 17	Absent	Jerome and Brad go back	Jerome and Brad go back

		and forth exchanging and taking turns with headphones to hear the part they were editing. Few words were exchanged but they both seemed to know what the other was working towards. They also had parts of the transcript on the Google doc highlighted in different colors.	and forth exchanging and taking turns with headphones to hear the part they were editing. Few words were exchanged but they both seemed to know what the other was working towards. They also had parts of the transcript on the Google doc highlighted in different colors.
May 7	There was a major falling out as Jerome and Brad wanted to abandon Anastasia as a group member. She got upset, they all went out in the hallway to talk, and worked it out so they could continue to work together.		
May 10	Offers suggestions, helps make collaborative decisions	Offers suggestions, helps make collaborative decisions	Brad in front of computer editing, but without headphones so all could hear. Engages the other group members in decision making

Chapter 4: Producer's Commentary: An Assessment for New Media Literacies

While observing young video producers create imaginative films and informative digital journalism, I was constantly reminded that there is much more to video production than learning to set up a camera and mastering editing software. Throughout the production process, I watched young producers build upon social skills, engage in problem solving, become leaders, inventors, artists, and explorers. The young video producers I met were quite aware of the numerous skills they learned while creating videos.

- Jake, who directed his first film noted "I learned that the hardest part of making a film is the actual filming...getting everyone to do what I wanted them to"[3]
- Marty, an experienced film maker continued to learn new skills with each production stating "Um I think I had to learn how to deal with like confrontation...and I think uh I've really had to learn how to prioritize things and get things done...and I learned how to take over, but not in a rude way, which was important"[4]
- Chris, who wanted to create an imaginary setting for his film reflected "Actually I learned a lot of new tactics like with using a green screen because I'd never used one before so with this one I learned how to use a green screen properly, which is something new"[5] (Chris, Horizon Arts Charter School)
- Miguel, who had to manage several academic responsibilities mentioned "Uhh…hmmm…well I mean like looking at the actual new skills I learned just a handful

[3] Jefferson, 5 shot reflection, January 13, 2019
[4] Horizon, student interview, November 14, 2018
[5] Horizon, student interview, November 14, 2018

more of potential effects...but I think the biggest thing I learned from this is how to lead from afar"[6] (Miguel, Horizon Arts Charter School)

Through talking with students like Miguel, Jake, Marty, and Chris and observing the day-to-day filming process and collaborative moments in film courses, I was constantly struck by the variety of skills students developed throughout the process. They engaged in new media literacies while translating their ideas into storyboards and then used multiple modes of expression to communicate their vision. They invested in new technologies and learned new skills so that they can create something to share with their peers. And they worked with their peers to solve problems and challenge one another's ideas.

However, I found that this rich learning taking place throughout the video production process was often not represented in students' final videos. As I described in the prior article, in peer to peer critique, students engaged in argumentation; evaluated their peers' feedback; and envisioned wholly new approaches to their work that often failed to make it into their final video. These moments represent complex, collaborative learning processes that were often not reflected in their final videos and therefore were not realized through the assessment of their work. There was a disconnect between the rich learning taking place during peer to peer interactions and collaborative production and students' final products.

Even though many educators include video production into their classrooms, the disconnect between practice and assessment remains. Educators integrate media production into their classroom, but often feel unprepared to assess media due to a lack of knowledge of design (Reilly & Atkins, 2013). As a result, they either do not assess the assignments or assess new media based on the acquisition of factual content creating a "decoupling" of production practices

[6] Horizon, student interview, November 14, 2018

and assessment (Silseth & Gilje, 2017; Aagaard and Lund, 2013). The problem, according to VanKooten and Berkley (2016), is "messy." Educators value and teach process, but they often use assessments that focus on product.

How can educators assess the video production process in a way that highlights new media skills? And why should they? Huot (2002) argues that "we can, by changing assessment, change what we will ultimately value" (p. 8). Through evaluating process, collaboration, and new media literacies, educators can create assessments that will help shape what students see as valuable to learn (Silseth & Gilje, 2017). While extensive research has explored the connection between multimodal composition and assessment practices (Silseth & Gilje, 2017; Aagard & Lund, 2013; Ball; 2012; Godhe, 2013; Jewitt, 2003), there remains a disconnect between what teachers value about video production and the assessments used evaluate the learning process. Therefore, I examine two questions with the goal of proposing an assessment that mirrors the values and affordances of new media literacy:

- What do youth learn through the video production process?
- How do educators assess video production?

I argue that the "decoupling" of practice and assessment may be caused by the fact that the assessments used to evaluate new media literacies are not themselves reflective of the capabilities of new media. They are rarely multimodal and often do not fully allow for students to reflect on the distributed learning involved in video production. Educators often ask students to write down the feedback they received, examine how they revised their work, and explain the methods they took in composing, but they can just as easily--and perhaps more accurately-- show it. I argue that the skills learned in video production cannot be completely reflected through a

single mode, but can more fully be realized through using the same modes of expression used to create their video.

Literature Review

What is "New" about New Media Literacies?

Since the introduction of multiliteracies, the recognition that composers use myriad methods to communicate including textual, audio, visual, gestural, and multimodal (New London Group, 1996), teachers have sought new ways to integrate technology and multimodal composition into the literacy classroom. There are many ways that educators can implement new media into their classrooms from the creation of podcasts (Vasquez, 2015); graphic stories (Danzak, 2011); game creation (Kangas, 2010; Howland, 2012; Robison, 2008); to video production (Jocson, 2012; Halverson, 2013; Ranker, 2008; Bruce, 2009; Brass, 2008). Yet, incorporating technology into the classroom is not enough for students to experience the benefits and learn to negotiate new media. Most scholars today agree that what makes these new literacies "new" is not the use of technology, but the mindset of collaboration, participation and distribution (Jocson, 2018, 2012; Lankshear & Knobel, 2006). New media is "shaped by but not reducible to technologies" (Jocson, 2018, p. 9). As Jocson (2018) explains it, new technology has shifted the ways we read, write, communicate, and share our work and the new, contemporary mindset is one built on collaboration, participation, and distributive expertise. As new media assignments have become a norm in literacy classrooms, new media literacy is often incorporated in a hierarchical manner where the focus on using technology takes precedence over designing for purposeful co-production. When this happens, collaboration is often integrated in an additive or accidental manner rather than recognized as a driving element of new media learning. This hierarchical approach is counterintuitive as collaboration and distribution of

knowledge are the core ways in which learning takes place in new media production. When collaboration is incorporated as an addition and not the driving force in planning new media assignments, students miss out on rich learning opportunities.

To prioritize the skills over the reliance on technology, Korina Jocson proposes the term "new media literacies" to reflect literacies that are digital, interactive, hypertextual, virtual, networked, and simulated (Jocson, 2018). There are four key skills involved in new media literacy: the ability to communicate using multiple modes in particular contexts; the ability to use media technologies for new experiences; the ability to build on a mindset of collaboration, participation and distribution; and the ability to consume and evaluate media forms critically to challenge normalized discourses (Jocson, 2018). These skills are essential for anyone participating in today's highly technological and global society.

Assessments for Learning: A Sociocultural Perspective

Assessments are often used in schools to measure student learning. However, intelligence, from a sociocultural perspective, is not a static state, but is ever-shifting and socially constructed through a series of interactions with other people (Pea, 1997; Vygostky, 1978). For video producers, these moments are made up of encounters with opposing viewpoints, feedback from their peers, and interactions with others who participate in their production and who thereby help shape their learning. Applying an assessment to a final video rarely takes into account the realization that learning involves this social construction of knowledge (Silseth & Gilje, 2017). Educators often apply rubrics to final videos that report on content specific evaluation and provide little room for students to demonstrate the complexity of their involvement with their peers or the new skills they gained throughout production.

Silseth and Gilje's (2017) study of new media assessments provides a foundation for understanding how assessments can build on sociocultural perspectives of learning. They provide an approach to assessments as interactive activities that allow students to participate just as they do with the rest of their learning. As teachers and students negotiate learning through ongoing activities, students take an active role in explaining and reflecting on their meandering and multifaceted path and can demonstrate how outside factors such as their peers and their lives outside of school impact their learning.

One way that composition teachers have moved toward interactive assessments is through the use of reflective assessments. Reflective assessments provide space for students to comment on group contributions and have a more profound impact on student learning and helps students understand and see themselves as learners (Silseth & Arnseth, 2011; Silseth & Gilje, 2017). When assessments allow for reflection of self and of group members, they can serve a purpose beyond evaluating learning and can become a tool that also enhances learning (Silseth & Gilje, 2017; Black & Wiliam, 1998, 2009; Gipps, 1999; Sadler, 1998).

Additionally, reflective assessments can provide students more opportunity to expand upon their production process. From portfolios to journals, students can provide their teacher with background information about their process, to reflect on their choices, and to think forward about how they would change their work if they had more time. Directed reflection can engage students in "problem-exploring" which can help them develop a disposition of curiosity to consider multiple positions, explore with trial and error, and to recognize that there is often more than one solution to a problem (Wardle & Roozen, 2012). Skills such as these help students in transferring writing-related knowledge across genres and media (Wardle & Roozen, 2012).

Assessing New Media Literacies

As multimodal and new media literacy assignments made their way into the classroom, educators had to determine how to assess those texts. This task became daunting for many instructors as some lack the confidence in evaluating design as they feel they have a lack of training in the area (Reilly & Atkins, 2013). As a result, some instructors decide not to assess the multimodal portions of assignments (Murray, Sheets, Hailey, & Williams, 2010, Sorapure, 2006). Through studying educators' use of assessments for multimodal composing, Aagaard and Lund (2013) found that because teachers have a lack of experience about how to assess multimodal texts, they adopt a variety of strategies most of which are tied to acquiring factual content. Additional research has shown that although teachers provide students with the opportunity to compose using new media, these resources are not included when teachers assess learning (Silseth & Gilje, 2017).

Educators wishing to integrate multimodal composing into their classrooms can choose from a variety of flexible and adaptable rubrics (Burnett, Frazee, Hanggi, & Madden, 2014); reflection exercises (VanKooten & Berkley, 2016; Shipka, 2009); creating rubrics with students (Reilly & Atkins, 2012; Ball, 2012) and ePortfolios (Bourelle, T., Rankins-Robertson, S., Bourelle, A., & Roen, D., 2013). A teacher looking for a rubric to assess any kind of digital assignment can look no further than Kathy Schrok's blog "Guide to Everything" where she compiled over 100 rubrics that teachers can download and use to assess videos, blogs, podcasts, and game creation assignments (Schrok, 2011). Yet, the majority of available assessments used to evaluate multimodal texts do not allow students to use the same variety of modes to express what they've learned and to reflect on the process. If educators value process, collaboration, and new media literacy skills, assessments should mirror those priorities. In turn, this will help shape what students see as valuable to learn (Silseth & Gilje, 2017).

Combining New Media Production with Sociocultural Assessment Practices

In order to create assessments that allow for students to reflect on the new media literacy production process, a process that prioritizes one's ability to communicate using multiple modes in particular contexts and to build on a mindset of collaboration, participation and distribution (Jocson, 2018), assessments should afford students those same advantages. Neuroimaging studies have demonstrated that learning itself is also multimodal in nature and that meaning emerges from perception, manipulating objects, and moving the body (Miller, Knips, & Goss, 2013; Johnson, 1987). Therefore, the best types of new media assessments would also draw upon the same multiple modes students regularly use in their learning (Miller et al., 2013). To that end, this article examines what assessments educators are currently using in the video production classroom to determine what a multimodal reflective assessment could entail.

Methods

This article examines two related questions: 1) What do students learn through video production and 2) How do educators assess video production? In this section, I separate the two questions to detail the context in which I examined each question, the data collected, and analysis methods I used to answer the questions.

What Do Students Learn Through Video Production?

To answer my first research question, I conducted an instrumental case study (Stake, 2000) in a high school video production classroom. I selected this site because Bruno, the educator, has been recognized for his innovative video production course.

Context: Bruno's Cinematic Language Course

Bruno is an educator, an actor, and a playwright who works at Horizon Arts Charter School, a project based public charter school in a small town in the Midwest that focuses on artistic production and presentation. The mission of the school, to "empower people to think critically, engage creatively, and establish strong human connection in order to cultivate the next generation of changemakers" comes through in each of the classrooms which champion collaboration. At Horizon Arts, students are taught how to talk to one another about their work and participate in purposeful discourse using Harvard's Visible Thinking--routines meant to guide student thinking structure classroom discourse (Visible Thinking, n.d.). As a result, students are extremely comfortable working together, talking to one another, challenging one another's ideas, and asking their peers for feedback. Like all of the educators at Horizon Arts, Bruno regularly integrated the thinking routines and collaboration into his classroom practices.

Bruno teaches English, film, and drama. His Cinematic Language Course serves as an introduction to filmmaking. Upon entering, students have a variety of experience levels with video, some even taking Bruno's course for a second time. The course serves as an introduction to film creation with an emphasis on creative production. Students regularly critique outside films and their peers' films to improve their practice and engage in improv to work on their acting skills. Throughout the semester, students create both collaborative and individual creative movies and documentaries. Even when students are tasked with editing and producing their own films, they are encouraged to collaborate with their peers. Bruno's classroom was inline with the school's mission in this way.

Bruno's Philosophy on Assessment. Teachers at Horizon Arts Charter School use standards-based assessments. In a slideshow that Bruno shares with new parents and students he describes standards-based learning in easy to use language to describe the five categories:

1. Advanced. Advanced work goes beyond the requirements but is still technically accurate.
2. Proficient. Proficient work meets all of the requirements.
3. Approaching proficient. This work is not entirely accurate and may require revisions.
4. Emerging. Emerging work demonstrates effort, but has several serious errors.
5. No evidence. There is no evidence of student work (slideshow presentation, October 21, 2019).

As standards-based learning is often new to students and parents at Horizon Arts Charter School, Bruno also shares what they find to be the benefits of standards-based assessments:

1. They are more specific. A grade of B+ for example, doesn't tell a learner very much about what they did well or areas in which they need to improve.
2. They allow students to revise only what needs to be revised.
3. They identify strengths and weaknesses.

Built then on standards-based assessments, Bruno creates rubrics for each film assignment that are built on the state standards for drama and film. "I almost always adapt the wording [to] make it more student-friendly. This is particularly true in Cinematic Language, where I essentially boil the standards down to Pre-Production, Production, and Post-Production." Bruno also assesses such things as "Habits of Professionalism." These are "weighted lower, so they aren't likely to impact a final grade, but still give students (and families) a sense of how they're doing with Habits of Professionalism" (email correspondence, October 21, 2019).

In addition to rubrics, Bruno integrates numerous opportunities for students to reflect on their learning both orally in class and through reflective writing activities. He commented that "[g]enerally, I try to de-emphasize final grades with students and lean more towards verbal

reflection, peer conferencing, and one-on-one conferencing to provide feedback to students" (email correspondence, October 21, 2019).

Data Collection

I worked as a participant observer in Bruno's Cinematic Language Course for the length of one video production cycle observing pre-production, production, and the post production stage (Jocson, 2012). I chose one focus group based on the following criteria: access to multiple versions of the video in process; access to storyboards and post video reflections; access to video or audio recording of critique sessions, and the ability to interview students from the production group.

During this time, I conducted whole group and small group observations throughout the production process as youth proposed ideas for their videos, storyboarded their projects, shot video, edited their projects, participated in critique, and revised and viewed their final product. I composed ethnographic field notes and video and audio recorded critique sessions for the focus project. I conducted semi-structured interviews with the young producers to understand more about their production process. Finally, I collected artifacts from this group throughout production including field notes of brainstorming sessions, post production reflections, as well as the rough and final cuts of videos. Table 1 describes how data sources were used in the study.

Data Source	**Use in the study**
Ethnographic Field Notes (8 days of observation) Email correspondence with educator (4) Slideshow describing standards-based grading (1)	Used to determine Bruno's philosophy on assessment as well as summative and formative assessments used in video production
Video recording of critique session with rough cut of video (1) Post production video recorded interviews with	Used to determine where and when ideas originated, how they came into fruition, and the skills student employed throughout the production

students (2) Rough cut and final cut of video (2) Ethnographic Field Notes from Small Group Conversations (8 days of observation)	process
Assessments from three sites: Rubrics (5); Post-production written reflections (2); Post-production video commentary (2) Interviews and email correspondence with educators Ethnographic fields notes from three sites	Used to determine how educators assess video production in their classroom

Table 1. Data sources and use in study.

Data Analysis

Using video recordings of critique sessions, interviews with students, and video artifacts of the rough and final cuts of the collaborative video, I conducted bi-directional artifact analysis which combines narrative analysis, discourse analysis, and artifact analysis and allows researchers to move bidirectionally, "from final product backward and from initial idea forward" (Halverson & Magnifico, 2013, p. 406). I chose to focus analysis around moments of critique and peer to peer learning as critique can serve as evidence of learning in digital video production (Soep, 2006). While looking backward and forward in time through artifacts, interview responses, and field notes from collaborative discussions, I traced the narrative of the production process noting where ideas originated, how they came into fruition, and the skills students employed throughout this process.

How Do Educators Assess Video Production?

To answer my second research question, how do educators assess video production, I reviewed assessments in Bruno's class and compared these to assessments used by other educators to get a broader sample of assessments. In total, I reviewed nine assessments used in

three video production classrooms including assessments from Bruno's class. I chose these three classrooms because similar to Bruno, the other two educators also teach video production for youth ages 14-18, grades 9-12. All three educators have been recognized for their innovative video production courses. As such, they do not necessarily reflect that which is typical, but that which is possible as we learn more about the phenomenon itself (Stake, 2000). Table 2 provides an overview of the three video production courses and the assessments used in each classroom.

Course Title	**Teacher**	**Course Description**	**Assessments**
Cinematic Language	Bruno	Introduction to video production and cinema for students in grades 9-12 in a public charter school.	Rubrics Director's Cut Reflection of Film Shots
Digital Journalism	Amanda	Elective English course for juniors and seniors at a public high school in a large suburb. Course focuses on digital journalism.	Rubric
Video Production	Andy	Quarter long, elective course at a small, project based community school with just over 100 students in grades 9-12.	Rubrics Reflection Writing Analysis of Film Shots

Table 2. Research sites accompanied by course descriptions and list of assessments.

Context

In this section I offer a detailed description of the other two teachers and courses I observed during data collection. As I previously described Bruno's course, this section only provides a brief description of Amanda and Andy's course providing enough information to position their assessments in context.

Amanda's Digital Journalism Course

Amanda's Digital Journalism course was an elective English course for juniors and seniors at Bartell High School, a public high school in a large suburb. Throughout the semester,

Amanda's students worked in groups of 3-5 to create three in-depth journalistic pieces and weekly video announcements. Amanda's students were regularly recognized both locally and nationally for their video journalism. Amanda put much effort in transferring ownership of the course into the hands of the students as she believed that interest based and project based assignments were essential for learning. She hoped for students to take ownership of the class and allowed the class to shift based on what her students brought with them each semester. She gave students much autonomy and trust in how they managed their time and the topics they chose to pursue.

Amanda introduced the idea of critique early in the semester through having students assess their own videos using a self-assessment rubric. The rubric focused on six concentrations: purpose & controlling idea; filming; research & evidence; visual interest & editing; sound; and continuity. For each concentration, students were asked to assess their work with a scale that included a numeric scoring of 4-1stars and grade of A-D (4 stars=A; 3 stars=B; 2 stars=C; 1 star=D). Students were also encouraged to provide comments for each concentration. Using this same rubric, Amanda ran formal critique sessions for students to pitch their video ideas for the first two videos having each group share their story ideas with the class who then filled out the rubric and provided vocal suggestions in front of the class. After these first two instances, Amanda used the same rubric to evaluate student videos throughout the semester.

Andy's Video Production Course

Andy's class, Video Production, is a quarter long, elective course at Jefferson Community School. Jefferson Community School is a small, project based public charter school in a mid-sized college town with just over 100 students in grades 9-12. With a focus on democratic learning, peer learning and peer feedback is the ethos of the school's culture.

Students are regularly required to talk with their peers about their work and peer feedback is an element of most assignments, no matter the subject area. Students in this course ranged from seniors to freshmen and students had varied levels of skills, but most seemed to have previous video editing skills even if just a little bit. The course is meant to introduce students to the essentials of video production including story creation, acting, shooting, editing, and learning and using discourse language such as language surrounding shots, angles, etc. The course started with an introduction to the early black and white films, following chronologically almost as the students' film productions follow the timeline of film itself. Andy uses examples such as Charlie Chaplin movies and has students add the old time effect to their videos to mimic this older style.

Two students who had previously taken Video Production served as peer mentors throughout the quarter. As mentors, their main role was to provide feedback to their peers throughout the production process. For final assessments, Andy uses a variety of rubrics and reflective exercises for each video assignment, giving students the chance to explain their decisions and reflect on ways they will use their new skills in future assignments.

Data Collection

To understand how educators assess video production, I collected nine assessments from three video production classrooms: five rubrics, two post-production written reflections; and two post-production video reflections. I also collected artifacts such as a slideshow Bruno used to describe assessment to new students and parents in his class and regularly communicated with Bruno via email to paint a full picture of assessment in Bruno's Cinematic Language course (see Table 1 for a description of how data sources were used in this study).

Data Analysis

As educators used both final rubrics and reflection exercises to assess video assignments, I reviewed five rubrics and four reflection exercises. I used descriptive coding to create initial categories for the topics covered in each assessment. All of the questions assessed fell into the following categories: editing, cinematography, storyline, characters, questions about process, reflections, and questions about student behaviors such as turning in the assignment on time and working with peers.

Finally, I created a two-variable case-ordered matrix (Miles, Huberman, & Saldana, 2014) to compare the findings from my analysis from my first research question to the findings from my second research question. This allowed me to compare what students are learning in video production to the assessments educators are using in video production to see where there may or may not be overlaps.

Findings

This section details two sequential ideas stemming from my research questions. I begin this section by first detailing what students can learn through video production beyond content-level skills through the close analysis of one video project. I then analyze nine assessments used in video production classrooms to show what they do and do not assess. Finally, I overlay the results of both research questions in comparing that which students can learn through video production and that which is assessed through current assessment measures.

Affordances of Video Production

To demonstrate what youth learn through video production, this next section traces the production path of "Anxiety" a three minute silent film created by a group of four students, Marty, Chris, Sigrid, and Mariah. The film portrays the struggles of a young person who suffers from social anxiety. At the start of the film, viewers see a sole actress attempting to leave their

apartment to go to a party. The actress tries to put her keys in the door, turns and fumbles with the keys, walks back and forth, and quick camera shots switch back and forth to show the actor's growing anxiety. Eventually, the actress makes it out of the room and goes to the party. Throughout the production process, the producers of "Anxiety" engaged in collective problem solving; they used new technologies to advance their understanding; and navigated group dynamics, and critically evaluated feedback.

Collective Problem Solving

During the pre-production stage, students were individually assigned the tasks of brainstorming a color, symbol, and image they would like to see in a film. Students were then assigned to a group of three or four and were tasked with coming up with an idea for a film that incorporated at least one color, symbol, and image from each student. Even from the first moments when Marty, Chris, Sigrid, and Mariah formed a group they were instantly engaged in problem solving. Marty, one of the producers, described the process:

> A lot of the beginning was really difficult because we had all made these sheets where it was like a color you wanted to see, a symbol, and an image...And we all had completely different things and it was just hard to just smash it into a narrative that worked because one of the criterias for the film was that we had to all have something that we like personally wanted in the film...When we were all put together we all had completely different ideas. I wanted to do something kinda like crazy and abstract and weird. I wanted to have like wild music playing and I just really wanted to let loose with it and just do something not serious. But a lot of the other students wanted to do something a little more serious, so we ended up just talking about the things we wanted to see in our

film...so we kinda just shoved all of our ideas together and created this idea of someone with social anxiety trying to leave.

The pre-production process continued to be a series of compromises and negotiations as they worked to combine all of their individual ideas into a collaborative video. Marty, Chris, Sigrid, and Mariah came together with three symbols they wanted to see in their film: clashing swords to show conflict; an empty chair to demonstrate loneliness; and gears turning to show the passing of time. The first problem they had to solve was what symbols, images, and colors to use and how to include at least one idea from each person. Marty described this as a difficult task: "figuring out the technicalities in the beginning was difficult, but we just talked it out as much as we could. We used a logic like we're going to be in a school so swords isn't gonna work, we'll figure out a way to meld that into our story and have it work"

They also struggled to find ways to include other symbols in their story. Chris, who originally had the idea of using gears to show the passing of time realized that they could create the same message with the use of keys rather than gears. Marty reflected that it was Chris "who came up with the idea and he was the one who wanted to see keys turning on a ring because uh he was the one who wanted the gears turning, but when we talked about like the type of film we had he was like 'oh we can turn the gears in the keys that were turning!'" The keys ended up serving two purposes: the keys could both replace the gears in showing the passing of time and they could have two keys clashing to replace the idea of the swords clashing.

They then had to solve another problem. One of the students really wanted to see an image of a bad character standing behind a good character. However, when they formed their group only one student agreed to act in the film. So, they had to determine a way to create this visual using only one actor. Only having one actor also shaped the idea for their story: if they

used an internal conflict they could get by with using just one actor. They settled on the idea of using the same actor, first dressed in white in the front as the "good" character--in this case the one who wants to escape from her anxiety--and the character in black representing her anxiety trying to hold her back. Image 1 reflects the combination of initial ideas to form new ideas.

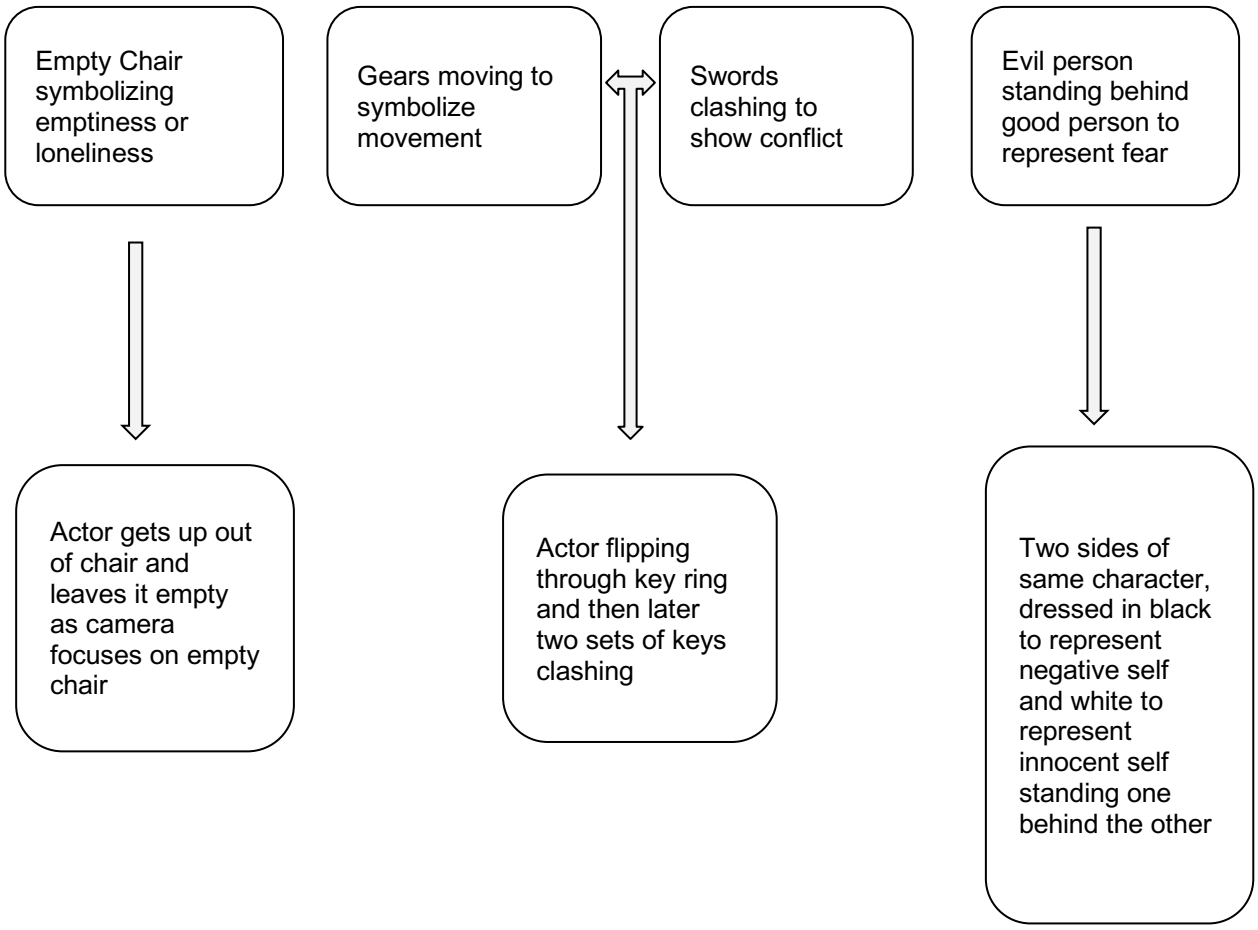

Image 1. Path of individual students' ideas combined into new, collective ideas

Although their images and symbols were altered through the process of making, the requirement to use each individual person's ideas inspired the group talked through their film, negotiated, remixed, and re-visioned what their film could look like, using many of the same

skills that are regularly practiced through participatory cultures. Because each person brainstormed ideas prior to forming the group, they had equal weight in forming the basis of their story. They had to pool these initial ideas together for the purpose of shared knowledge creation.

Using new tools to expand understanding

When the group moved from planning into the production stage they were faced with another complication. Marty, Chris, Sigrid, and Mariah set out with inspirational goals of overlapping two videos in order to see the same character directly behind the other character simultaneously. To do this, they had to film the actor first in front wearing all white and then a second time directly to the side all in black. It was a task they'd never attempted before. Chris explained

> I remember being at the start of making this all of us being like "are we going to be able to do that? How are we going to be able to do that?" Because it was something we had never seen done in a film by a student before where we make someone appear and disappear out of existence and um have them, have the same person in the same shot. Like we'd seen it in actual professional films, we just didn't know how to accomplish that.

Their process included a variety of trials, revisions, and reshooting. They started by filming the actor once in front wearing all white and again in the back wearing all black, but after putting the videos into Premiere Pro they made two major realizations: 1) the backgrounds (from the setting sun to wires on the floor) were inconsistent which created a problem when they overlapped the videos and 2) because they had not used a tripod, the two films were inconsistently shaky and therefore did not match up when one was overlapped with the other. To

remedy this, they had to refilm, figure out a way to stabilize their iPad without a tripod, and re-examine the set to make sure everything was consistent. They used available resources, including their teacher, Bruno, to solve the problem.

First they had to figure out how to stabilize the camera without a tripod. Working together, they used the available tools around them to create a DIY tripod: "we had to like MacGyver a stand for the iPad. We had to wrap it to like an actual camera stand so that the camera would sit still." Next, they had to figure out how to overlap video footage to create the impression that the two characters were in the same room. For this, they sought out Bruno. Part of the issue the students ran into early on is that they were trying to complete a fairly technical editing in WeVideo, which does not allow for the same capabilities as other editing software. But because they were motivated to create a type of shot, Bruno explained that they would have to use Adobe Premiere to complete the shot. They researched how to create an overlay shot in Premiere and taught themselves how to use the tool to accomplish their sophisticated shot. Brandon explained the importance of having an expert like Bruno available for solving difficult problems and as a guide to learning new technologies: "he also gave us a little bit of help as ah needed to like make the special effects work as we wanted to know. Once we got it the first time we were like 'boom, now we know how to do it.'"

Navigating Group Dynamics and Working as a Team

Although students were not assigned to designate specific roles for the project, Marty, Chris, Sigrid, and Mariah took on clear roles fairly early on in the project. Because Mariah was the only member of the group who agreed to act in the film, she became the sole actor. After the pre-production stage, Sigrid took on the role of videographer and Chris and Marty--although not

explicitly stated--both viewed themselves as the director, creating some power dynamics throughout. Table 3 describes the roles of the four member production team.

	Preproduction	**Production**	**Post-production**
Marty	Co-creator	Director	Editor
Chris	Co-creator	Director	Editor
Sigrid	Co-creator	Videographer	Videographer (Refilming)
Mariah	Co-creator	Actor	Actor (Re-filming)

Table 3. Roles of four member production team

Knowing that he would miss quite a few classes, Chris told the group at the start that he didn't want to act as he knew production time would be limited. His absences also helped him approach this film differently than he had previously imagined his role as a director: "I went in with the mindset that I need to learn how to ah let the group do what it wants...it's just letting the group do what they can do to accomplish that and not being like a like…being an authoritative director versus an authoritarian director is I guess how you would put it."

Chris' notion of leadership and collaboration continued to shift throughout the project. As the group took on a fairly complex cinematographic challenge, they found they were running out of time to complete their film and this required the group had to reconfigure how they thought about collaboration. Chris explained his shifting perspective on collaboration:

> In collaboration people usually think of like the whole group together but in this case I'm talking about us dispersing for it...we prioritized getting those shots that we know we'd need to do um the editing that we didn't know how to do, so we sent two of us off to the editing room because we have like, you know, we used WeVideo mostly just for the

sequence editing because we could have multiple people editing at the same time in the classroom.

Chris' explanation describes how his group shifted from collaboration to cooperation in order to multitask. Knowing all of the work that would have to be completed, he recognized that his group members would be best suited to separate momentarily in order to come back together for their shared purpose.

Evaluating and Implementing Feedback

During and after the critique process, video producers make numerous decisions and must determine whether or not they wish to incorporate their peers' feedback into their films. In my research, composers tended to use feedback in three ways: they incorporated feedback directly into their work; they rejected and ignored feedback; or they incorporated some element of the feedback in a way not originally intended. Incorporating feedback into their revisions, youth defined the boundaries of their work and transferred, applied, and adapted new methods.

Directly Incorporating Feedback. For young video producers, defining boundaries often involved taking feedback from peers and adding the feedback directly into their final videos. Most often, feedback that was incorporated directly into the final film commented on the movie in its current state, such as stating that a part of the film was confusing, paired with a suggestion for improvement. However, when feedback was too specific, composers often did not take their peers' suggestions. Suggestions that were broad and left room for the composer to use their own creative approach to the changes often were incorporated in an additive manner.

Film	**Feedback that was not included**	**Feedback that was included**
"Anxiety"	"Maybe start with the key and the door going back and forth trying to put the key in the door but they can't" "…Uh I didn't really understand it so I was	Camera is shakey; should use a tripod "The power of silence was very portrayed there" but...add audio to portray anxiety such as a heartbeat or clock ticking"

	thinking maybe she could have or they could have her pacing around deciding away from a phone call of go away." Add more lighting to the door scene because it was hard to see. Couldn't see the door handle Suggestions: get shot from outside of door and an extreme close up	

Table 6: Feedback used to Define Boundaries

Suggestions about audio and visual choices such as "add audio to portray anxiety such as a heartbeat or clock ticking" were taken up directly as the peers themselves provided feedback in keeping with the composer's vision of the message or mood of the video. In this way, their peer's feedback helped them expand upon and heighten what they already understood to be their vision. The additions did not drastically change their work. Composers could incorporate broad feedback while still maintaining their unique artistic vision in choosing what sad song or what sound they used to best fit the mood of their work.

Rejecting or Ignoring Feedback. Defining boundaries also meant rejecting feedback sometimes even multiple times. During the critique session, several students suggested refilming parts of the film to capitalize on the use of the door handle. Peers suggested refilming to improve the lighting to refilming to get additional shots such as an extreme close up of the door knob. Despite these suggestions, the producers chose not to refilm these parts of the film.

Incorporating Feedback Indirectly. Young composers often took up feedback indirectly transferring feedback into other areas of their work. Incorporating feedback in this manner drove the revision process of the young composers of "Anxiety." During a critique session, the group received several suggestions about parts of their film that did not seem to portray anxiety, but rather some other emotion such as anger or indecisiveness. While the group did not take up their specific suggestions about how to improve this, the message of inconsistency became their focus

for revision. Marty, one of the young composers from the group commented “I think a lot of the feedback we had was the audience was confused through a lot of it because we didn’t have everything fixed altogether. I think they talked about fixing continuity because we had struggled a bit with that.” To create a more cohesive message, the group came up with new ways to ensure the audience felt the character was anxious rather than angry such as adding slow and fast paced music to create the mood and match the character’s actions as well as a heart beat to show the character’s growing anxiety. Marty described how she saw the role of anxiety becoming apparent for their audience:

> Um I think the biggest thing for me that would point to anxiety would be the actor credit scene where the character dressed in black is sitting and resting against the door because I feel like a lot of who have anxiety in this school has a lot of kids with anxiety. They’ll say that they can get out and do fun things, but their anxiety lingers and they just have to kinda shut it out for awhile and I thought that illustrated that well. I’m not sure if other students took it that way, but I would have.

Inconsistency became a focus for this group even after they finished their video. While their peers had suggested refilming shots of the door the character was trying to open for consistency, the group left the shots as is. This inconsistency is fairly apparent: the main character tries to fight her anxiety while holding a set of keys near the door, trying to find the strength to unlock the door; however, the shots of the door led to a door that did not have a keyhole. While there was an in-depth conversation about this during the critique session, the group chose to not refilm this part. However, after the film was complete they were very critical of other parts of the film that still had inconsistencies. For example, they shot in the same room for a few days and couldn’t get the desks set up exactly the same way, they felt the lighting was

different coming through the windows on different days, and in a shot where the main character is battling her inner anxiety, we saw hands from both the good and evil part of her inner self one wearing black and the other wearing white and as their hands battle we see a contrast in that one hand has short nails and the other has long nails. While these inconsistencies were difficult to find as a viewer, they pressed on the minds of the creators even post production. Although were unable to fix all of the inconsistencies in the film, this does not mean that they did not

Assessing Video Production

To understand how educators assess video production, I analyzed the content of nine assessments from three video production classrooms. This is not to say that these are the only assessments used in these classrooms. All three teachers used summative and formative, informal assessments everyday in their classes from observing students' work in action[7]; having students fill out progress reports or vocalize what work they already achieved and what they needed to do next[8]; to asking students to reflect as a whole group about their contributions to their groups and ways they may continue to be good group members[9]. However, as these formative assessments were not often used to determine progress in video production or were not weighted as heavily (email correspondence with Bruno, October 21, 2019), I analyzed nine summative assessments.

Assessing Disciplinary Content

As educators used both final rubrics and reflective assessments to evaluate video assignments, I reviewed five rubrics and four reflection exercises. Throughout the nine assessments, content fell into nine categories: editing, cinematography, storyline, characters,

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[7] Horizon Arts, field notes, October 1 & 2, 2018; Jefferson, field notes, November 19 & 29, 2018; Bartell, field notes, February 13 & March 6, 2018;

[8] Horizon Arts, field note, October 3 & 4, 2018; Jefferson, field note, November 19, 27 & 30, 2018; Bartell, field note, March 29, 2018

[9] Horizon Arts, field note, October 2, 2018; Jefferson, field note, December 19, 2018; Bartell, field notes, February 8 & 15, 2018

audio, questions about process, questions that asked students to reflect, and questions tied to behaviors such as turning assignments in on time. A majority of the questions related to disciplinary content such as cinematography, editing, and audio. Table 4 details the content found in each of the nine assessments.

School	**Bartell High School**	**Horizon Arts Charter School**				**Jefferson Community School**			
Assessment Title	Final Production Rubric	Final Video Rubric + Questions	Video Diary Rubric	Director's Cut Jacob	Director's Cut Tony	Silent Movie Assessment Rubric	Reflection Shot Analysis	5-shot film rubric	Silent Film Reflection Form
Editing									
Cinematography									
Storyline									
Characters									
Audio									
Process									
Reflection									
Behaviors									

Table 4. Content of assessments.

The most common questions were about cinematography (eight of the nine assessments). Cinematography, the art or science of motion-picture photography, was often used in connection with descriptions of visuals (“The visuals are chosen with care and communicate the director’s intention fully”; camera use (“Camera is steady”), shots and angles (“A variety of shots and angles are used” or “Uses three or more camera angles”); framing (“The framing is adequate, but uninspiring” or “All shots are well framed”); and sometimes lighting (“Lighting is bad”). Table 5 details examples of questions for each corresponding theme.

Code	Example From Assessments
Editing	Pacing is strong - i.e., film is not too quick or too slow. The flow and pacing of the film adds to the story. Could you read the titles? Were they on the screen long enough? Were there too many? Were they too long?
Cinematography	Describe the shot (e.g., camera movement, position and/or movement of actors, angle, etc.) Describe why you used this shot? What effect were you trying to create? What idea were you trying to communicate?
Storyline	Was the plot/ storyline easy to follow and understand? A unique, surprising, or otherwise interesting story is clearly communicated.
Characters	Was it clear who the characters were (e.g., what their role was)? Was it clear what the relationships were between the different characters?
Audio	The audio is well mixed - e.g., levels are consistent throughout. Music aligns well with the content and pacing. The sound quality is excellent. There is no distracting background noise and all interviews are audible
Process	If you did this challenge or made this film again what changes would you make **and why**? Discuss at least two things that you learned about making a film/ shooting video/ editing/ working with others, etc. while doing this assignment?
Reflection	Discuss one shot that you included in your final film that you are very happy with. What was the shot? What worked well about it?
Behaviors	Assignment was submitted by deadline of October 5. What are your responsibilities to your group?

Table 5. Example questions from assessments.

Questions regarding editing, storyline, and audio were used in eight out of the nine assessments. Editing questions covered everything from flow (“Pacing is strong--i.e., film is not

too quick or too slow); to inclusion of transitions ("transitions are smooth and add to the quality of the video"); and use of credits and titles ("Titles are hard to read or distracting and take away from the overall quality of the film"). Storyline content included plot development ("A unique, surprising, or otherwise interesting story is clearly communicated"); flow and clarity ("Story is clear and easy to follow and understandable"). Audio was often tied to purposeful use of music ("Was the music a good fit?); editing of sound ("The audio is well mixed--e.g., levels are consistent throughout"); and sound quality ("There is no distracting background noise and all interviews are audible").

Questions about characters were present in three assessments. Character included character development and roles ("Was it clear who the characters were?") and relationships among characters ("Was it clear what the relationships were between the different characters?").

Assessing Process and Behaviors

While most of the above content relates to what might be found in a final video, several assessments included opportunities for students to demonstrate their process (three out of nine), to reflect on their work (five out of nine), or describe their collaborative efforts throughout production (two out of nine). Questions like this are tied to what Bruno describes as "Habits of Professionalism" (email correspondence, October 21, 2019). Although they are often weighted lower and often do not impact a final grade, they give students a sense of how they are doing (Bruno, email correspondence, October 21, 2019).

Throughout the assessments there were two questions that asked students to reflect on their work with their groups: "What are your responsibilities to your group?" and "Discuss at least two things that you learned about making a film/ shooting video/ editing/ working with others, etc. while doing this assignment?" Although these questions offer space to reflect on

group work, neither of the questions were tied directly to evaluation. The first question "what are your responsibilities to your group" was included on the bottom of a rubric and not included in the final grade but used as additional information for the teacher. The second question asking for students to reflect on their learning incorporated "working with others" as one of four options students could choose to examine.

Process questions were most often written as open-ended questions that allowed for students to reflect and describe their work (see Table 5 for a list of examples). Examples such as "Discuss one shot that you would like to improve or change. What was the shot? Why didn't you like it? What would you do differently?" allow students to practice "problem-exploring" or considering multiple positions, exploring with trial and error, and recognizing that there is often more than one solution to a problem (Wardle & Roozen, 2012).

Using Rubrics For Video Assessment

Five out of the nine assessments were rubrics that teachers used to assess students' final videos. Out of these five rubrics, the most common areas assessed were basic editing, cinematography, storyline, characters, post-production editing and audio (see Table 4). Rubrics all followed a similar structure: each content area such as cinematography to character, had three to four corresponding columns for evaluation markers. Each column was given a number, letter, or performance descriptor. Table 6 compares the evaluative markers of the five rubrics.

Assessment Title	**Scoring Rubric**			
Final Production Rubric	A-4 stars	B-3 stars	C-3 stars	D-1 star
Final Video Rubric	Advanced (4)	Proficient (3)	Approaching Proficient (2)	Emerging (1)

Video Diary Rubric	Advanced (4)	Proficient (3)	Approaching Proficient (2)	Emerging (1)
Silent Movie Assessment Rubric	Strong	Needs Tweaking	Needs Major Fix	
5-shot film Rubric	Strong	Needs Tweaking	Needs Major Fix	

Table 6. Evaluative markers on assessment rubrics.

Post Production Reflections

Four out of the nine assessments asked for student reflections (see table 4). The most common questions related to cinematography and required students to reflect on their process (four out of four reflection assignments did both). Reflective assessments gave students a chance to describe their film-making process and critique their own work. There were three distinct reflection assignments across two sites: the reflection shot analysis, silent film reflection form, and director's cut film extras.

Silent Film Reflection Form. The silent film reflection form consisted of five reflective questions which asked students to reflect on what they learned about making a film, a shot they were happy with and what worked well with it, a shot they would like to improve and why, a challenge they faced, and what they enjoyed about creating their film. The questions were open-ended and prompted students to do more than provide an example. For example, one of the questions included several directions for students to explore: "Discuss one shot that you would like to improve or change. What was the shot? Why didn't you like it? What would you do differently?" These additional questions guide students through reflective thinking and problem exploring to reflect in a manner that might help guide their next production.

Reflection shot analysis. The reflection shot analysis asked students to draw a picture of each of their shots, describe the audio accompanying each shot, and then describe and analyze

each shot. The result resembles a storyboard which is most often used as a pre-production tool. However, used as a reflective exercise requires students to justify their choices and examine whether those choices helped them create the vision they intended. By naming the different shot types, students can also name those shots and disciplinary content infused into their production showing that they both tried out new camera shots and understand how those shots work to create a particular mood or viewpoint. Image 2 is one section of this assessment.

SHOT # ___	
	Describe the shot (e.g., camera movement, position and/or movement of actors, angle, etc.)
Audio	Describe why you used this shot? What effect were you trying to create? What idea were you trying to communicate?

Image 2. Excerpt from the reflection shot analysis.

Director's Commentary. Similar to the reflection shot analysis, the director's commentary required students to reflect on the shots they used in their film and describe how each shot added to the overall story, created a particular mood, or established a particular effect for viewers. Rather than drawing each shot, students were asked to set up a video camera and record themselves talking about the shots. They then added the commentary to the end of their film and turned the larger video file in for evaluation. The teacher could then watch both the film and the director's cut. The activity of creating the reflection then served as a reflective practice for the director as they talked through their artistic choices.

In Tony's director's cut, he explained the shots he chose to put in his silent film explaining the impetus for each shot and how it aided in creating his narrative:

> So my first shot is it's a medium shot in totality. With Matt here…is over to the side. Eventually you can see him in the frame and I created that kind of shot because I felt like it showed enough of him to like...doing a close up just would be like very close up on the wall suddenly we see this giant head show up. It doesn't make sense. As whereas we have the whole medium shot it feels has more of a cartoony vibe so I'm going to work with that.

Through analyzing each frame in this way, students like Tony practice intentionality throughout the production process. Tony had to first purposefully plan his shots to create specific effects, execute each shot, and then review the shots together in the larger film to determine if he achieved the shots and how they aid in storytelling.

A Discrepancy Between Assessments and Video Production Skills

Few of the assessments used in video production evaluated the kind of new media literacy skills afforded through video production (see Appendix A for a complete overview of assessment content). None of the assessments included opportunities for students to demonstrate their ability to evaluate feedback, synthesize ideas, or problem solve. Five of the assessments allowed for students to reflect on their work and/or comment on the video production process: the final video rubric with questions; the video diary rubric; the two director's cut video reflections; the reflection shot analysis; and silent film reflection form. Not surprisingly, two overlapping assessment areas--process, and reflection--were most often found in the reflective assignments students completed after creating their film.

Three of the assessments contained elements that could be tied to new media skills gained through video production: the final video rubric with questions; the video diary rubric; and the silent film reflection form. While these three assessments do not comment on additional skills

such as evaluating feedback; synthesizing ideas; and problem solving, exploring the ways they assess students use of new tools and group dynamics provides insight into how we may design assessments tied to new media literacies.

The Final Rubric with Questions

While this assessment follows the same format as most rubrics and mostly assesses content found in the final video, there is a slight shift in use and timing that makes this rubric more reflective of group responsibilities. While students have access to the rubric prior to the last week of production, Bruno also hands out this rubric during the last week for students to answer two questions found at the bottom of the rubric: 1) What does your group need to do to complete your video to proficiency this week? 2) What are your responsibilities for the group? Including these questions with the rubric takes this rubric from an assessment of product to one that represents the distributed production process and individual responsibilities.

The Video Diary Rubric

This rubric stands out from the other assessments as one of the categories assessed with the same weight as the other categories actually assesses the video production process through another assessment piece: the director's cut. In this way, the director's cut which is itself an assessment and reflection is included in the final rubric as well. To receive proficiency in this area, students must articulate and justify their decisions and how they worked to achieve their vision (see Image 3).

COMMENTARY [CST2: Production]	Each frame is chosen for a specific reason, and is explained thoroughly. Justifications are logical, and sometimes unexpected.	The use of all three shots is justified with an explanation.	Each shot is described.	Commentary exists, but does not connect with all three frames.

Image 3. Section of Video Diary Rubric.

By placing the "commentary" category here in the larger rubric, Bruno integrates elements of the production process into the rubric which otherwise assesses the final product.

The Silent Film Reflection Form

Because this assessment is entirely a series of questions that allow students to reflect on their process, it creates numerous opportunities for students to discuss their collaborations with their peers, their attempts to use new technologies, their frustrations and their successes. The questions included are as follows:

- Discuss at least two things that you learned about making a film / shooting video / editing / working with others, etc. while doing this assignment.
- Discuss one shot that you included in your final film that you are very happy with. What was the shot? What worked well about it?
- Discuss one shot that you would like to improve or change. What was the shot? Why didn't you like it? What would you do differently?
- If you did this challenge or made this film again what changes would you make and why?
- What did you enjoy most about this design challenge (including the background activities) and why?

These questions were open ended and prompted students to reflect on their process, name two clear things they learned, and imagine how they might adapt their work having this new knowledge, allowing students to look forward to their next project.

Discussion

Through analyzing the collaborative video production process and the content of assessments used to evaluate video assignments, I found that students build on a variety of new media skills throughout video production and that the assessments used to evaluate video mostly

evaluates content rather than process. As such, this section includes a description of new media literacy learning afforded through video production; a rationale for assessments that value new media learning, a proposal for a multimodal assessment that allows students to reflect on their process, and a description of the benefits of the proposed assessment.

New Media Skills Through Video Production

When teachers integrate video production and new media into their classrooms, they are rarely only interested in a student's ability to edit and produce videos with clear audio. They build video production into their classrooms as they hope to prepare students for those new media skills they will need in their futures: the ability to communicate using multiple modes in particular contexts; the ability to use media technologies for new experiences; and the ability to build on a mindset of collaboration, participation and distribution (Jocson, 2018). Through analyzing the video production process and assessment practices, my research demonstrates that students can build upon new media literacy skills through video production through critically evaluating feedback; collective problem solving; navigating group dynamics; and using new technologies to advance their understanding.

The Ability to Communicate Using Multiple Modes in Particular Contexts

Communication is not just made through language, but with every sort of object from the gestures we use each day to the clothing we put on each morning. In video production, students assemble semiotic resources from images, video, audio, text, gesture for a unique purpose (Ranker, 2008). Through critique they learn to negotiate the available semiotic resources to determine best how to meet their intended purpose (Kress & Bezemer, 2008). Moments of critique can serve as evidence of learning in digital video production (Soep, 2006). Composers and video producers must be able to evaluate feedback, determine whether or not that feedback is

helpful, and revise their work accordingly. These moments when producers talk to their peers about their work shape the way they compose using multiple modes of expression. Each suggestion, feedback, question, and criticism creates an obstacle and opportunity for growth. As educators, it is our hope that students will move forward from these conversations, weigh the feedback presented to them, and learn more about their own production process through the critical evaluation of feedback. It is through this process that they will continue to learn more about how to communicate through multiple modes.

The Ability to Use Media Technologies for New Experiences

Through the use of numerous technologies, students can stretch their creativity and try new approaches to express their ideas. Video production is unique in that video creators use multiple tools throughout the process all for the purpose and each one of these tools allows video producers to expand upon and see their work from new directions allowing them to explore new possibilities. Video cameras allow producers to see their vision from multiple angles, through a variety of shots and filters. Editing software affords the opportunity to create illusions and use camera tricks to achieve a look such as those students from “Unlock” who were able to create something they had only witnessed in movies. Each of these moments create opportunities for learning as students construct representations, discuss their ideas with their peers building relationships between previous and new knowledge.

The Ability to Build on a Mindset of Collaboration, Participation and Distribution

Video production affords numerous challenges and complications which require collaborative problem solving. Through problem solving, arguing, negotiating meaning, creating, and making decisions, youth gain the necessary skills to participate in the larger global, social environment they encounter out of school. Problem-based learning helps students approach real,

authentic problems, explore potential solutions, test, and reiterate. These problems are problems that keep students coming back, trying new things, and learning new skills. Rich learning takes place in these moments--when students talk to one another about what they are doing, ask one another questions, are confronted with conflicting ideas, and solve collective problems.

By allowing producers to practice and then reflect on this process and how they would change their work if they had more time, students engage in "problem-exploring" which can help them develop a disposition of curiosity to consider multiple positions, explore with trial and error, and to recognize that there is often more than one solution to a problem (Wardle & Roozen, 2012). Skills such as these help students in transferring writing-related knowledge across genres and media (Wardle & Roozen, 2012).

Much like a news room or film crew, students in video production must take on individual roles and also gain an understanding of the roles of their peers. Similar to video producers in the industry who work with a production team made of a film crew, screenwriter, director, lighting technician, music or sound technicians, actors, and editors, students engaging in video production learn not only about their roles, but about their peers' roles as each role is simultaneously tied to the work of others. Each person depends on and is ever connected to the work of the entire production crew. Video production can help students navigate group dynamics because their roles are dependent upon each other in this way.

Assessments for New Media Literacies

In analyzing assessments used in video production classrooms, I found that the three assessments that included content related to new media literacy were the final rubric with questions, the video diary rubric, and the silent reflection form. These three assessments allow room for students to answer specific questions and reflect on their process. The video diary

rubric is unique in that one of the areas of assessment is tied to another, individual reflective assessment assignment: the director's cut. Because these assessments were open ended and prompted students to reflect on their process, they allow for students to actively participate in their assessment resembling the kind of interactive assessments Silseth & Gilje (2017) argue have a more profound impact on student learning as students can see themselves as learners. The assessment becomes an activity students engage in with their teacher rather than something that is acted upon them. Furthermore, these assessments respect that composing and producing are highly social processes. It is not the final product that is the most important part of the learning, but the skills gained along the way.

The director's cut, in particular, is an authentic assessment to video production as it resembles a genre used in the field. The assessment allows students to learn more about what it means to be part of a discipline and the different genres of composing that occur within the field. They are asked to think about video rhetorically in recognizing how video can be used for different purposes. Simultaneously, they learn the skills and literacies of the field itself helping them see themselves as media producers.

The director's cut is also multimodal in nature and asks students to use the same types of tools used in the production of video itself. Video producers create through multiple modes of media. To complete the director's cut, students also attend to video, audio, and text all the while reflecting on their work. As learning is itself multimodal (Miller, Knips, & Goss, 2013; Johnson, 1987), the director's cut is an assessment that resembles the learning itself.

Although my research shows that many summative assessments evaluate content rather than the process of video production, this does not mean that these same assessments are without purpose or value. The ability to compose a coherent and compelling storyline and develop

characters to which viewers can relate mirror the same skills we hope to instill in students through composing traditional texts. Additionally, assessing editing, audio, and cinematography allows teachers to begin to see how and if students can use the appropriate tools in video production. However, without an additional area for students to reflect on new methods or ways of using new tools, their production process, and their collaborative efforts, assessments may not examine the valuable new media skills teachers hope to teach through video production.

Producer's Commentary: A Multimodal Assessment for Video Production

One of the assessments Bruno assigned in his class, the director's commentary, asked students to video record themselves reflecting on each of the shots they used in a three shot film and describing why they chose the shot, how it creates mood and perspective, and how it builds on and establishes the plot in the story. The result was a self-directed analysis of cinematic and editing decisions made throughout the production process. Students reflected and described their decisions and, if directed, could include details about their production process. As such, I propose an expansion to Bruno's director's cut with an assessment that mimics the types of director's commentary that now accompany feature films and docuseries where the producer explains their vision, their process, and how they did or did not achieve their vision. Accompanying students' final videos, a producer's commentary that analyzes shots, shares early versions of the film and behind the scenes footage could provide space for reflection of process and content creation in an authentic assessment mimicking a genre found in the film industry. A producer's commentary would include the following elements:

- Producer's Commentary. Producers narrate their process from beginning to end, explaining how they came up with the idea for their story, inspirations they drew from, and their artistic vision comparing images from their original storyboard and scenes from

the rough and final cut of their videos to show how the story developed throughout production.

- Analysis of a Scene. Producers walk through their most complicated scenes or a scene they are most proud of explaining what they hoped to achieve, how they worked to achieve it, complications they encountered and how they worked to overcome those challenges, and a reflection on what they would do if they had additional time or different equipment to continue to work on the scene. To reflect this process, producers would use behind the scenes footage and final shots that mirrored their narrative.
- Behind the Scenes. Producer interviews the cast or crew about their role in the film, combines interviews with behind the scenes footage to show group members working together in a variety of ways. Cast and crew interviews allow for multiple perspectives demonstrating how individual contributions feed into the larger production.
- Critique Corner. Producer shares feedback they received from their peers and discusses how they changed their film based on the feedback using clips from the rough and final cuts of video to show the changes.

The producer's commentary asks students to reflect on their production and learning process employing the same communicative modes used to create their video. Students would use rough and final cuts of video, images of their brainstorming or storyboards, audio from interviews and their narration of their process and continue to build on the editing skills used in video production to create a coherent, multimodal text. In doing so, the producer's commentary builds on New Media Literacy skills requiring students to communicate using multiple modes in particular contexts; using media technologies for new experiences; and building on a mindset of collaboration, participation and distribution (Jocson, 2018).

The producer's commentary is both a product and a reflective process. Through keeping track of the production process and actively thinking about the process while collecting behind the scenes footage, students would be invited to actively participate in the assessment of their learning (Greeno & Gresalfi, 2008). This type of assessment can move beyond evaluating learning and become a tool that also enhances learning (Silseth & Gilje, 2017; Black & Wiliam, 1998, 2009; Gipps, 1999; Sadler, 1998). Through reflecting on their production process, students will work through the complications they faced, their successes and areas for improvement so that they can continually improve in those areas. The producer's commentary is also a video other students can watch where they can see how their peers faced obstacles and how they worked to solve their problems adding to their own list of practices for problem solving and creative production techniques.

The producer's commentary guides students to reflect on the distributed nature of learning. Through narrating behind the scenes footage, interviewing crew members and editing clips to create a coherent story of production, students will need to explore how others impacted and influenced their production and learning and situate their learning toward the activity itself. In doing so, they will comment on the social distribution of intelligence which comes through the construction of the video itself and other learners' participation in a shared goal (Pea, 1993). As distributed learning becomes more and more important in our social world, reflecting on how this learning occurs and what it looks like, young people may continually build upon these skills.

The producer's commentary is an authentic disciplinary genre in the film industry. As students create their own similar video, they can expand upon skills of the profession and develop disciplinary literacies. Students may compare their work to that of filmmakers in the field and more easily see themselves as media producers.

Conclusion

Students' lives are filled with all kinds of assessments from high-stakes testing to a variety of informal formative evaluations and conferences. While the education field has become assessment driven to a fault, the answer is not to eliminate assessments but to create purposeful assessments that allow students to actively take part in their progress and learn through those assessments. The producer's commentary does not solve all problems. Indeed, the act of creating a producer's commentary would demand additional time for production and would require teachers to reimagine how to approach evaluation, but the producer's commentary is unique in that it would allow students to continue developing the same skills of editing, use of audio, while simultaneously reflecting on their work. Coupled with their final video, the two could work hand in hand in assessing the breadth of learning in video production.

Appendix A

Assessments Analyzed for Content			Skills Students Gain Through Video Production				
School	**Assessment Title**	**Content Evaluation in Assessment**	**Critical Evaluation of Feedback**	**Synthesizing Ideas**	**Problem Solving**	**Using New Tools**	**Navigating Group Dynamics**
Bartell High School	Final Production Rubric	Editing					
		Cinematography					
		Storyline					
		Audio				X	
Horizon Arts Charter School	Final Video Rubric + Questions	Editing					
		Cinematography					
		Storyline					
		Behaviors				X	X
	Video Diary Rubric	Editing					
		Cinematography					
		Process					
		Reflection					
		Behaviors				X	
	Director's Cut Jacob	Cinematography					
		Characters					
		Reflection					
	Director's Cut Tony	Cinematography					
		Characters					
		Reflection					
Jefferson	Silent	Editing					

Community School	Movie Assessment Rubric	Storyline					
		Characters					
		Audio					
	Reflection Shot Analysis	Cinematography					
		Process					
		Reflection					
	5-shot film rubric	Editing					
		Cinematography					
		Storyline					
		Audio					
	Silent Film Reflection Form	Cinematography					
		Audio					
		Process					
		Reflection					X

Chapter 5: Limitations and Future Research

This document reflects the iterative learning process of the doctoral dissertation. It is a reflection of where I started, what I've learned, and will forever shape the researcher I hope to be. As this document reflects a learning process there are several limitations to this work. I do not see these as failures, but rather recognize the ability to describe them as a demonstration of my "coming into being" as a researcher.

Limitations

This dissertation is based in the context of three classrooms all of which had a dedicated educator passionate about video production. While this context is important in thinking about how video may be used widely in public schools, there were certain schoolwide and classroom specific opportunities that aided in the opportunities given to students. Horizon Arts Charter school, for example, is a project-based school with a non-traditional schedule that allows students to move freely each afternoon to work on projects. Jefferson Community School holds numerous elective courses that allow students to choose courses that most interest them. Amanda has several video cameras that students can check out throughout the day and take home with them over weekends. This is not the reality at every school and as such the sites in this dissertation do not fully reflect the reality of all public schools.

Because I focused data collection around the video production and critique process, I was able to fully analyze the act of critique but was not able to understand how identity and power impacted these highly social moments of learning. It was difficult to understand how the moments of critique were impacted by individual students' identities and the existing power structures without additional data about each student's identity. Additional data would have

allowed me to look more closely at the moments of critique from a critical perspective recognizing that language does so much more than convey information but allows composers to integrate their perceptions and offer their perspectives on a given topic (Gee, 2001). I am certain that students' identities impacted how they approached critique and collaboration, yet did not have the correct data available to approach this analysis from a critical perspective.

Understanding how composers use critique and feedback to inform their work is highly complex. Through analyzing the available data, I found several gaps that could not be filled with the data I collected. To fully understand how composers use feedback, I would need to have close communication with composers throughout time. In the future, I hope to return to similar work and interview producers at several moments during production to capture their directions and thoughts regularly. I would also record them watching and talking about their video at a few points in the process and use these comments to more fully trace the feedback loop.

Finally, through writing about the collaborative components in video production I realized that in order to understand how collaborative groups functioned I would need a much broader, ecological approach. Although I spent significant time in each of the three sites, analyzing each site from an ecological approach would take additional data collection in order to understand more about the school itself from the administrators and students. Fully understanding each of the teacher's motivations and philosophy would also require in depth biographical interviews. In future studies, I will take a much broader approach to data collection toward learning ecologies.

Future Research

This dissertation was written as a series of three articles each intended for publication in literacy and education journals. I intend to publish the first and second article as written in this

dissertation. While analyzing data and talking with peers and colleagues about this work I've continued to think about ways to make this work more practical so that the research does not live for the sake of research, but may be applicable for the classroom. Therefore, I plan to build on each article prior to publication.

"Merging Out of School Learning Strategies with Academic Pursuits: Video Production and Participatory Cultures"

As written in this dissertation, this first article demonstrates that argumentation and inquiry skills are essential in allowing young composers to drive their learning during critique. I will expand on this argument to create a practitioner piece that will allow teachers to take steps toward integrating critique into their classroom. I will share methods teachers can use to teach these skills including those I witnessed in the classrooms, those found in peer review and writer's workshop practices already in place in classrooms, and those methods developed for teaching discourse such as Harvard's Visible Thinking Routines and the University of Pittsburgh's Accountable Talk Practices.

Recognizing that composers benefit from different types of feedback in the early stages and later stages of production, I will create a guide for critique during the pitch session and the review of the rough cut. Building on the successful practices witnessed in the classroom, this guide will help teachers and students understand what types of feedback might be most helpful at two stages in the process.

Finally, as this article is intended for a practitioner audience, I will tie the important skills found in critique to the Common Core Literacy Standards. This comparison will help teachers justify their decisions to use video production in the literacy classroom and demonstrate how out of school practices can be purposefully integrated into the classroom.

““Boom! Now we know how to do it”: Video Production for Authentic Collaborative Experiences”

While writing this article I recognized that there were numerous factors leading into the collaboration taking place in each classroom. Although video production did create multiple problems to be solved that required collaboration, it was not the video camera or editing software alone that made students collaborate. Each teacher built community in their classroom throughout the year, assigned tasks that scaffolded collaboration, and constantly adapted to ensure students worked together in productive ways. With this in mind, I will expand on this article by fully examining the teacher’s role in collaborative production. I will explain how the teachers in this study guided students to ensure collaboration was occurring. I will explore how teachers can design video assignments that encourage collaboration over cooperation. Using Andy and Bruno’s assignments as models, I will demonstrate how assignments that require problem solving can be used in combination with video production to nurture collaboration. While video does create opportunities for problem solving, teachers can ensure there are multiple opportunities for problem solving through purposeful assignments.

As a continuation of this article, I will work with a colleague to compare collaborative production in two different environments. Using the collaborative models I found through video production and a colleague’s exploration of informal maker-based production, we will examine the nuances that move across contexts and those that are domain specific. This comparison will help draw out the features that are unique to different types of production practices and highlight that which video production has in common with other production practices.

“Producer’s Commentary: An Assessment for New Media Literacy.”

For this article, I am forever thankful for the innovative ideas of Bruno who welcomed me into his classroom and showed me what teaching can and should look like. It was Bruno's practice of a short director's commentary that inspired the ideas for my third article. They are therefore not mine alone to present to the world. I plan to collaborate with Bruno in reframing this article to celebrate his work and ideas and eventually publish this article as a collaborative piece.

I would like to evolve the idea of the producer's commentary, have students and teachers use the assessment, and get their feedback in order to create an adaptable assessment that can be easily integrated into the classroom. This process would create the opportunity to evaluate and compare the producer's commentary to the other nine assessments analyzed in this article.

I intend to restructure the article so that the producer's commentary takes center stage. After introducing and explaining the rationale for the assessment, I will examine how the nine assessments compare to the aspirational goals of the producer's commentary. In doing so, I will explain which parts of the assessments are more in line with assessments for learning and how educators may then create their own assessments for learning.

Finally, I will explore how the producer's commentary and a focus on the production process allows all students--no matter their ability level--to show where they started and what they learned in the process. Assessing final videos can create an unfair advantage to those students who are producing a video for the first time or who do not have as many opportunities to work with the technology. However, a focus on process allows students to show what they've learned by examining their production process from beginning to end. As technologies continue to become a part of the classroom, we must remember that not all students have the same amount of experience or access to these technologies outside of school. As such, it is essential that we

are not assessing students on their previous experience with technology but on their process of learning.

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