

**Paper Pterodactyls and Popsicle Sticks:
*Expanding School Literacy through Filmmaking and Toymaking***

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In a time of high-stakes testing, pushed-down scripted instruction, and intense teacher accountability, play-based and child-friendly learning in early childhood classrooms is increasingly set aside to make room for broad-based intervention aimed at preventing low test scores in elementary school. To reclaim emergent, child-friendly, and learner-directed curricula, it is necessary to revisit the extensive early literacy research base on children's play (Dyson, 2003; Paley, 2004; Wohlwend, 2011; for comprehensive sources on early literacy research, see Larson & Marsh, 2013; Marsh, 2010; Pahl & Rowsell, 2012). At the same time, there is an equally compelling need to update early literacy curricula to better utilize the digital technologies so prevalent in modern childhoods (Alper, 2013; Burnett, 2010). We are living in a digital era when we finally have sophisticated and user-friendly technologies that are just right for little fingers to operate to easily capture children's play texts. Specifically, touch screens on phones and tablets are mobile and responsive, with filmmaking apps that are simple and intuitive. These new tools seem designed for early childhood teachers to use with young children. To be clear, we do not intend to invoke an old/new binary and either/or choice so often constructed around print and digital tools. Rather, we follow the children's lead to see how they are making use and making texts with *all* the multiple resources they find around them--from paper and pencils to tape and popsicle sticks to cameras and digital video. Elsewhere, we have argued that play is a productive literacy with reconstructive potential to help children participate more fully in school cultures (Wohlwend, 2011). In our recent work on literacy playshops, we showed that video storying is a particularly powerful form of storytelling with toys that invites invention and collaboration among players (Wohlwend, Buchholz, Wessel Powell, Coggin, & Husbye, 2013). In this chapter, we examine how young children in a combined kindergarten/first grade classroom, when encouraged to make their own digital films and paper toys, achieve academic goals consistent with prevailing standards for literacy but also importantly, enact and tap into their individual literacy proficiencies and media interests.

We examine children's classroom play and storying from a *strength orientation*, that is, we recognize young children as richly-resourced literacy learners who come to us already knowing much about their worlds. For example, children bring cinematic awareness and literary knowledge to video storying, resources gained through their interactions with favorite films, video games, and toys in popular media franchises (Medina & Wohlwend, in press). This perspective aligns with ethnographic work that finds literacy in everyday ways of making meaning with ordinary artifacts in children's homes (Gregory, Long, & Volk, 2004 Pahl & Rowsell, 2010) that contribute to children's cultural repertoires (Gutiérrez & Rogoff, 2003) and technical knowledges developed through experiences in family and community life (González, Moll, & Amanti, 2005; Scollon & Scollon, 1981). Further, this strength orientation recognizes early childhood teachers as knowledgeable professionals and responsive kidwatchers who can build upon children's interests to develop responsive play-based literacy curricula.

Nexus of School Literacy

Literacy research has documented widespread trends in school policies, classroom routines, and literacy programs that increasingly skew classroom practice to fit academic standards, anticipated test items, and teacher accountability criteria (cite Ravitch, 2010; Stipek, 2006; Dyson, 2008). We use the term *School Literacy* to refer to a particular nexus of widely-circulating glocalized practices, justified by global discourses and enacted locally in classrooms. In this nexus, global discourses of accountability and standardization are materialized at the classroom level in literacy routines such as the turn-taking and page-turning among readers in a scripted reading group. However, the nexus

of School Literacy in a given classroom is not a monolithic set of practices but encompasses additional, often contradictory educational discourses. In the classroom in this case, School Literacy included discourses of print productivity, cooperative learning, and individual achievement materialized through popular literacy curricular models such as writing workshop and balanced literacy.

We pause here to unpack another term: *nexus of practice*, an important concept that helps us look closely and critically at educational practices, including those we advocate. A nexus of practice is a cluster of taken-for-granted practices that make up expected--and usually unexamined--ways of doing things (Scollon, 2001). Nexus analysis (Scollon & Scollon, 2004) is a methodology that blends discourse analysis and action research to promote social change. It involves engaging in, navigating, and changing the nexus to address the inequities that are upheld by our shared acceptance of commonplace practices. As educators, nexus analysis helps us look critically at our own tried and true practices with the most ordinary literacy tools to understand who benefits and who doesn't in our educational traditions.

Engaging the Nexus

To engage the nexus of School Literacy, we partnered with teachers in small study groups to work through shared inquiry toward teachers' goals. In this study, we collaborated with six early childhood teachers in teacher study groups to develop media literacy and filmmaking curricula--what we have termed *Literacy Playshops* (Wohlwend, Buchholz, Wessel Powell, Husbye, & Coggin, 2013) that combine collaborative play, storying, and media production. We focus here on one study group: during one school year, Karen met twice a month with two teachers who team taught in a K-1 classroom with about 50 5- to 7-year-old children. Beth and three members of the research team visited this classroom four times per week during one semester, video-recording play and film-making activities, children's films and puppet shows, and teacher study group sessions. Key to the teachers' discussions and curricular planning were readings on current perspectives and recent research on global children's media and critical literacies. Informed by cutting-edge research, teachers explored digital media technologies, challenged their own perceptions of parental beliefs about media, and expanded literacy curricula in ways that aligned with school goals and missions (e.g., meeting state literacy benchmarks).

Navigating the Nexus

To navigate the nexus in a particular place, we examine everyday routines with commonplace materials to uncover the implicit nexus of practice (Scollon & Scollon, 2004). Routines elicit automatic cooperation from students and acceptance as just the normal way of doing things at school. One indicator that value is placed on particular literacy practices and materials are the number of routines created to institutionalize and ensure their expected uses. School literacy routines are often established at the beginning of each school year and made habitual through daily repetition. For example, in early childhood classrooms with a writing workshop curriculum, we expect to see a buzz of activity: children talking, drawing, and writing books with paper and pencils or word processing software as they plan and produce first drafts, confer with teachers and peers, craft revisions, and share their work in the author's chair at the front of the class. Here are a few

examples of tacit routines and expectations for working with paper, a staple material in writing workshop, in this K-1 classroom:

- Stories are recorded on paper daily; they might be drawn but preferably are written.
- Paper is used for writing, drawing, and occasionally for cutting, folding, or stapling to make books.
- All papers are stored in individual writing folders, in labeled bins on low accessible shelves.
- Stories are regularly shared with peers who listen quietly so everyone can hear and make positive comments.
- In whole group sharing sessions, about 50 children sit in a circle and look at speaker; drawings are difficult to see, if shown at all.

When we unpack these routines, we can see how they support the following valued School Literacy practices:

- Writing independently, quietly, and continuously to fill pages of paper and create books
- Retelling by talking about drawings, reading own writings, and elaborating stories through talk
- Commenting on literature but primarily listening to others' stories by taking turns in whole group sharing

Some of these practices are more highly valued than others in the School Literacy nexus; writing, listening, and talking are positioned as more important than drawing. We can also see this when drawings must be transmediated--translated from one mode into another--from the mode of image into the preferred verbal modes of speech and print, that is, images must be explained verbally before they "count" and can be understood as texts within the School Literacy nexus. Drawn images are usually illustrations that accompany and enrich a written or spoken text, rather than understood as stand-alone artwork that convey meanings visually.

It is clear that some children thrive in this kind of classroom environment, particularly those "good students" who

- can produce pages and pages of text
- can wait patiently for a turn to speak (or not)
- can sit still and write or listen easily for long periods of time.

However, it is also clear that this approach constricts literacy to a single verbo-centric pathway that disadvantages many children. It leaves little room for children to experience stories by viewing, acting, crafting, singing, building, dancing, or playing with friends--diversified pathways that allow many more children to easily engage in storying (Gallas, 1994; Gregory, Long, & Volk, 2004).

Changing the Nexus

Changing the School Literacy nexus means imagining otherwise. The filmmaking and toymaking practices in Literacy Playshops (Wohlwend, et al., 2013) align with an emerging nexus of *New Media Literacies* (Jenkins, Clinton, Purushotma, Robinson, & Weigel, 2006) in early childhood education (Alper, 2013). Importantly, in nexus analysis, the power to transform sedimented practices in any nexus of practice comes from identifying and transforming a small but key practice along with the related modes and materials that anchor restrictive expectations. In the School Literacy nexus, we

identified *writing independently* as the key practice and *paper and pencil* as key materials that anchored expectations for individual production of a written text and that privileged speech and print over other modes. What happens when we shift the expectation that children must write their stories on paper to acknowledge and value other materials that children naturally use in play? How might we change the School Literacy nexus by accepting cameras and toys as valid literacy tools?

Expanding Storying in the School Literacy Nexus

In this early childhood classroom full of books and paper for making books, there were no toys. However, once children began making films, they spontaneously repurposed paper to create artifacts: the puppets, toys, and scenery needed for filming their play. In this section, we share examples of the kinds of artifacts that children produced when allowed to expand the idea of storying to include toymaking and filmmaking. Specifically, we look at two child-made films as examples of expanded storying: 1) flat paper puppets bouncing left to right across a paper backdrop and 2) a 2-foot paper Godzilla and paper pterodactyls crashing into paper buildings. Following each vignette and transcript, we first highlight how these printless texts meet School Literacy nexus expectations for verbo-centric storytelling. We then revisit the vignettes, looking closely at the paper toys and films through a New Media Literacies lens, to detail what we can see when we switch the nexus and change our expectations for what counts as story.

Horse and Dinosaur's Day (A Filmed Puppet Show with Paper Puppets)

Five first grade girls collaborate in the corner of the classroom, filming a puppet show that follows an unusual cast of characters from sunrise to sunset. The final film grew out of the multiple popsicle stick puppets, pieces of scenery, and envisioned plotlines that the girls developed independently and merged once the classroom teachers encouraged collective storytelling. The puppets starring in the final film include two brightly colored dinosaurs that are siblings (Fred and Lily), a turkey that crows like a rooster (Mr. Turkey), a cowgirl (Anna) and her horse (Mayley), and a dog (Cocoa). The girls move these puppets around on top of and parallel to the background that has been placed on the ground. The camera films the ensuing action from a bird's eye view.

Partial Transcript and Summary of *Horse and Dinosaur's Day*

The 2-minute film opens with the sound of the puppets snoring in unison: "So-me-me-me-me. So-me-me-me-me." Mr. Turkey wakes up the other characters with a loud "cock-a-doodle-doo." Anna, a brown-haired cowgirl, comes out from underneath her house and asks, "Hey guys, wanna have breakfast in the forest?" From here, the puppets move between playing in the barn and eating lunch and dinner in the forest. The most unexpected part of the story occurs after lunch (about one-minute into the film). The puppets are saying hello to the "birdy" in the tree, when Anna suddenly adds:

Anna: Oh, I almost forgot... she's pregnant! She had one egg, but I've got to call the doctor because it looks like she's sore and needs help. [Anna gets off Mayley and goes underneath the house to call doctor.] Bop-boop-beep-beep-beep. Ah, I'll be right over. [Anna appears on the the roof again, this time as the doctor.] The doctor is here. Let me put on my gloves. Eeeeeeeeeeee [attempting to pull out egg/chick]. I've got it. And here are her baby chicks [puts two yellow chicks in the nest]. One already hatched, that's why it is taller.

Mr. Turkey: Oh.

Anna: And there are your chickies.
Fred: Cute little chickies.
Lily: Let's see if they can fly.
Anna: Yeah, let's make them fly to the rainbow.

Surprisingly, the newborn chicks can fly up to the rainbow. Everyone jumps around for a few seconds before Anna says that it's time to go back. The chicks return to the nest, and Anna tells everyone it's time to go eat dinner in the forest. Lucy soon observes that "it's getting dark" and suggests that "it's time to go home." The film ends with the puppets saying goodnight.

We can see that the *Horse and Dinosaur's Day* film offers the audience a clear and predictable chronological sequence (sunrise to sunset) and thus an identifiable beginning, middle, and end. These story elements reflect first grade writing expectations in the School Literacy Nexus. Story structure was heavily emphasized by teachers during the filmmaking unit in order to address state writing standards that dictated students should be able to, "recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure" (CCSS, 2012, Writing 1.3). The girls' film offers an easy to follow plot line that marks it as "good writing" in this classroom. Teachers found that crafting an ending with a "sense of closure" was especially difficult for young students; their films--like their writing--would often be long lists of events that abruptly cut off with the phrase "the end." However, in this film, the young female filmmakers set up a story arc by articulating a problem (the pregnant bird), a resolution (the doctor arriving), and a closing scene (everyone saying goodnight). There is a sense of closure even without the tell-tale marker of "the end."

Larry vs. Godzilla and a Pterodactyl (A Live Action Film with Paper Toys)

In a small nook at the back of the classroom, Ezra dangled a paper robot from one hand while holding the camera in the other as he filmed, narrated, and animated the main character. His 3-minute film featured a villain's monologue and rampage by Lery (pronounced Larry), a giant robot who battles an equally large Godzilla, crushes a building, and finally retreats after he is carried away and dropped into the ocean by a pterodactyl.

Transcript of Lery vs. Godzilla and a Pterodactyl

Hahahahahahaha
I will DESTROY you Godzilla! [Closeup of robot's face]
You know why? Because.
Because once I destroy you, the people of Earth will bow down to me.
And then, they will do my biddings.
I want to be supreme ruler of Earth
And to do that, I just have to get rid of YOU.
RRRRRR-AW-YEEEEEE [Shot of Lery attacking Godzilla, drawn on a popsicle stick frame.]
Laser punch. Pshhhh Pshhhh.
Rrrraoww. Pssh pshhh pshhh.
Uh oh. He's going to blow fire on me.
He blew fire on me!

Curse you Godzilla! Curse you!
But I can still do some bad stuff.
Like crushing this building. Pshhhhh. *[Cutaway shot to crumpled paper bag building]*
See what happened when I'M done with it.
Hahahahahaha. *[Closeup of robot's face]*
Errrryahhhh. He blowed fire on me again.
Curse that Godzilla.
Rrrrow raaah raaah *[Shot of flying pterodactyl]*
(The pterodactyl's new.)
He's on Godzilla's team? You gotta be kidding me!
Aw-- You gotta be kidding me. He's picking me up! *[Shot of pterodactyl carrying robot]*
Wha-- He blew fire on me again. You gotta be kidding me. *[Shot of robot, sprawled on floor]*
Finally, the moment has come for me to destroy you. *[Shot of upright robot, resuming attack]*
Hey, wait. I just noticed something.
I am in the Oceanaut and I'm in a robotic suit.
I'm standing in the middle of the ocean. How did the building even get there? Huh.
I don't know. Well, anyways, I'm really trying to DAAAAAAZZZZZZEWWW
[Lower pitch to indicate Godzilla is speaking] Ok, ok. I'm going back to the ocean.
[Closeup of pterodactyl] Dum dum da dum dum. That's all, folks.

We can see much in this film that exceeds first grade writing expectations in the School Literacy nexus. In fact, the storytelling meets the third grade benchmarks outlined in the Common Core State Standards, albeit for written text rather than film:

Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

- a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
- b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
- c. Use temporal words and phrases to signal event order.
- d. Provide a sense of closure

Common Core State Standards, Writing 3.2a-d
(National Governors Association, 2012)

The archetypical maniacal laugh that opens the villain's monologue reflects its strong character development: "Hahahahahahaha! I will DESTROY you Godzilla! You know why? Because. Because once I destroy you, the people of Earth will bow down to me. And then, they will do my biddings [sic]. I want to be supreme ruler of Earth." The script is filled with expressive and descriptive vocabulary (e.g., *destroy, bow down, my biddings, people of Earth, supreme ruler, pterodactyl, robotic, the moment has come*). Further, the story arc is sequential and logical. The introduction sets up the conflict between Godzilla and Lery, establishes Lery as the antagonist, and explains the reason for their conflict. The dramatic conflict that escalates with the surprise

addition of the pterodactyl as another defender of Earth is resolved when the pterodactyl wins after knocking down the propped-up Godzilla “DAAAAAAZZZZZZEWWW” who retreats into the ocean. The pterodactyl closes the film with Warner Brothers’ classic cartoon wrap-up “That’s all, folks.”

Expanding Storying in the New Media Literacies Nexus

A second look at these vignettes from a New Media Literacies perspective allows us to see valued practices that are overlooked from a School Literacy perspective. In a School Literacy nexus that values print on paper and talk about print and encourages primarily book-like texts, we might worry about the time children spent making toys or working out who stands where. But a New Media Literacies nexus values action with artifacts and encourages multimodal storying with expanded forms of recording with digital cameras and all the available materials, including paper. During filmmaking, children focus on capturing action texts, writing only as needed to anchor their play roles or previously-negotiated pretend meanings. Accordingly, in this section, we also rely on image, through photographs of the child-made paper puppets and toys that reveal children’s inventive use of materials and modes.

Storying through Filmmaking

In the New Media Literacies nexus, texts are reinvented from moment to moment, with each change subject to player negotiation and agreement. As children play together, they negotiate who plays which character but also whether their individually proposed scenes cohere and make sense within their shared story. Similarly, filmmaking requires children to cooperate to distribute camerawork and character roles as they interact with each other and with materials. In this way, a New Media Literacies nexus expects and values texts that are interactive and fluidly multilinear, similar to digital literacy texts that have seemingly limitless paths and endings such as video games and virtual worlds.

The negotiation and collaboration needed to orchestrate the play expanded the classroom norm of sequential turn-taking and multiplied the ways that children could simultaneously participate. Of course, it is important to recognize that teacher mediation is often necessary to manage the challenges of equitable turn-taking. In the film *Horse and Dinosaur’s Day*, the girls initially planned to use a tripod to hold the camera so they could each manipulate their own puppets within the story. However, after a few trial runs one of the group members volunteered to be the camera person, “because if we just had a tripod the characters moved around a lot so [the camera] would just look at something blank.” The necessity for a camera person complicates traditional expectations of collaborative writing and accountability in schools where children are expected to equally contribute to a project/story. The tensions were also evident in the distribution of materials within the film: of the eight puppets appearing in the film, five were controlled by Amanda, while the other three group members each handled a single puppet. Amanda, as Anna the cowgirl, also initiated almost every transition in the storyline (e.g., “let’s go have lunch; “let’s go have a hay fight inside my barn”). The messiness of collective authorship opens up opportunities for classrooms to serve as places for teachers and children to explore what equitable social relations look like when engaging with and producing new media.

When multiple players contribute to a shared story, they must also bring their multiple ideas of the storyline together; when this produces tangents or story loops, the result is multilinearity. Although the girl filmmakers had to negotiate and merge a diverse collection of puppets, scenery, and storylines, their final *Horse and Dinosaur's Day* film was fairly linear. However, there was one identifiable moment of invention that expanded the linearity of the story. This rupture was initiated by Amanda's sudden recollection (as cowgirl Anna) that: "Oh, I almost forgot... [the bird's] pregnant! She had one egg, but I've got to call the doctor because it looks like she's sore and needs help." This introduces a pressing conflict to the storyline that had been missing up until this point as well as an immediate sense of tension. Anna proceeds to move between a series of different roles as she calls the doctor ("bop-boop-beep-beep-beep") and moments later appears as the doctor ready to help pull out the stuck egg/chick from the mother. Sound effects are a key modal element here in building tension as the doctor arrives and pulls the egg/chick out of the mother chick; it is Amanda's extended "Eeeeeeeeeee" that conveys the struggle and strain of the moment far more richly than what can be represented visually with paper.

Children also negotiate the meaning of the story and attend to the ways inventions and added ideas interact within a cohesive text. A rupture in cohesive meaning-making and its close connection to improvisation are apparent in the *Godzilla* film when Lery suddenly realizes that the improvised move to the ocean now makes the crumpled skyscraper incongruous in the ocean fight scene. "Hey, wait. I just noticed something. I am in the Oceanaut and I'm in a robotic suit. I'm standing in the middle of the ocean. How did the building even get there? Huh." In this rupture of the storyline, Ezra attends to the constraining expectation to produce a cohesive text but quickly decides to move ahead to keep the film action going.

Storying through Toymaking

Importantly, a New Media Literacies perspective also values the improvisation that produces novel uses of ubiquitous materials such as writing paper. As children played, they colored, cut, folded, rolled, taped, crumpled, and tore paper to make their own toys, puppets, and scenery, enriched with a variety of modes (e.g., speech, sound effects, gestures, movement, etc.) to create modally complex meanings, not to compensate for their emergent language but because they intended to convey the richest meanings possible (Kress, 1997).

While the girls created flat, traditional popsicle stick puppets for *Horse and Dinosaur's Day*, there were subtle details in their construction that expanded opportunities for interactivity between the characters and their surroundings. The most obvious example of this was the design of Anna and her horse Mayley. The brown and white spotted horse had a detailed saddle with stirrups that was taped rather than glued— making it removable. The barn even had a small saddle rack where the saddle could hang when it was not needed; however, the girls rarely took the saddle off "because sometimes it rips"—referring to the limitations of making with paper. The saddle was also designed

in such a way that Anna (on a popsicle stick) could slide into the saddle and essentially “ride” the horse (fig. 1). This allowed the creator to control both Anna and Mayley with one hand—freeing up a second hand to operate additional puppets. These design features gave the flat puppets a more toy-like feel, suggestive of action figures and dolls that are sold with accessories that can be added or taken off based on the desires of the child. Elements of the scenery were also designed to provide puppets opportunities to interact with their surroundings. The hayball hanging in the barn was taped only at the top so that puppets could physically “swing” the ball around during a hay fight scene. And Mr. Turkey’s wreath-like nest on top of the blue house (fig. 1) had a slit cut on the left side so that the puppet could slide into the nest easily, thus appearing to sit inside the nest rather than on top of it.

In addition to interactivity, there are signs that the girls began to think in three-dimensions despite the apparent flatness of the scenery. Anna’s house, the blue and pink striped building on the left, appears to have a tree “floating in thin air” with the chicks’ nest, but the girls were eager to point out that “if you fold the roof over you can see the tree” *behind* the house (fig. 2). Young children often do not represent depth relationships between objects in their drawings, and thus it might be expected that the tree would be drawn *next* to the house. However, here the girls experimented with layering paper in order to give the audience the impression of depth within the scene. For example, Amanda attempted to convey depth when she moved her puppet underneath the scenery to indicate when Anna was inside the house. The children’s various puppet handling practices also reflected expanded three-dimensional thinking. While all of the puppets moved with an archetypical bouncing motion, a closer look at the girls’ divergent holding and handling strategies in relation to the set and other puppets reflected conflicting responses to implicit questions like: Should puppets face the scenery, each other, or the camera? Should the puppets move parallel or perpendicular to the flat scenery? These questions speak to the limitations of working in a two-dimensional representational story world while thinking about action as embodied and interactive.



Figure 1. Interactivity: Cowgirl Anna Rides on her Horse Mayley



Figure 2. Thinking in 3-Dimensions: Anna "Inside" (Underneath) her House

In the dinosaur story, the girls adhered more closely to teacher directions for drawing and cutting out characters, aligning with the School Literacy expectation for two-dimensional characters who progressed in a more or less orderly fashion across a flat scene. Popsicle sticks were provided by teachers who anticipated that children would make stick puppets. Across the room however, the boisterous fight scenes in the Godzilla film were enabled by a set of paper toys that had substance and texture. Ezra's group repurposed paper and popsicle sticks from flat images to 3D artifacts by rolling tubes, crumpling paper to create mass, and taping sticks and parts together. These characters were two- to three-feet tall, too unwieldy for popsicle stick handles and not intended for puppets; these were clearly toys with movable and interactive parts. Godzilla was drawn on a 3-foot piece of paper and stretched on a frame made of taped-together popsicle sticks, propped up by a cardboard stand. Lery the 2-foot robot with moveable legs and arms was constructed of paper tubes connected with masking tape (fig. 3). The pterodactyl was the most identifiable toy with its framework of popsicle sticks and crumpled paper to support its wings (fig. 4). Its claws provided the necessary interactivity to snatch and carry Lery. Children treated these as toys; handling them like dolls rather than bouncing them across a set like puppets. Godzilla, Lery, and the pterodactyl were examples of the unexpected making and repurposing of materials that occurred when teacher allowed children to make toys.

Paper Pterodactyls



Figure 3. Lery (Villain)

Figure 4. Interactivity: Pterodactyl Flying Away with Lery



Using Filmmaking and Toys to Change the Nexus of School Literacy

Overall in this classroom, children expanded the range of story production as they blended live action with animation of hand-drawn, constructed paper characters and paper scenery. Children recorded story ideas by

- drawing storyboards
- writing cast lists
- constructing paper toys puppets, props, 3D set construction
- digitizing films and capturing play through video, voice recording

Storying takes various forms in the New Media Literacies nexus: *action texts* such as live action play or animation videos, *image texts* such as storyboards, and *print texts* such as scripts. Additionally, toys are key *artifacts* that children use to anchor story meanings (Wohlwend, 2009). The following chart summarizes the contrast in expectations, materials, and modes in School Literacy nexus and New Media Literacies nexus.

Table 1. Contrasting Expectations, Modes, and Materials in School Literacy Nexus and New Media Literacies Nexus

	School Literacy Nexus	New Media Literacies Nexus
Key Practices	<i>Writing</i>	<i>Playing</i> <i>Toymaking</i> <i>Filmmaking</i>
Expectations	single reader/writer	multiple players
	working	playing
	on an original text	in a shared scene
	using print to craft	using action to interact
	personal narrative	embodied activity

	individual production	sustained collaboration
Available Modes	Verbal: Print, Speech	Verbal: Speech, Sound Effects
<i>Visual Modes</i>	Image (illustration reflects text)	Toy Design (toy reflects character or artifact) Scenery (backdrop) Camerawork (framing, zooming)
<i>Action Modes</i>		Movement Interactivity Toy Handling (front/back, vertical/horizontal)
Key Materials	Paper with Pencils/Markers Books	Paper with Scissors, Tape Toys and Puppets Digital Cameras

In this classroom, the goal of expanding the nexus of School Literacy and changing the nexus to New Media Literacies expectations hinged on putting cameras in the hands of children. The provision of cameras and expectation that children would make films provided the key element of change because suddenly it was not enough to write scripts and plan storyboards. Children needed puppets, toys, and sets to film. A School Literacy nexus supports paper products: books and even the scripts and storyboards of pre-production filmmaking. But once the camera is turned on, there must be action and there must be something to see. We found that when children do not find the materials they need, such as toys or interactive sets, they make them to fill that void.

It is important to recognize that shifting our expectations and changing nexus takes time. At first, teachers asked children to write down their plans for films on storyboards, requiring them to transfer their play or animated popular media to paper. In this transmediation, rich meanings that children conveyed by action, movement, and sound effects were reduced to a few words on a page. Similarly, the children’s engagement in playing stories shriveled to quiet compliance as they filled paper sheets with scripts and cartooned storyboards. Even when children did record plans in writing, when they picked up the camera to film stories changed radically. Later, when the teachers discussed this in study groups, we talked about alternate ways to record play meanings that could move beyond print. We envisioned children recording stories in film and using the camera to create video clips or screen shots that could be cropped into digital puppets or printed out to create photo sequences to use as storyboards. Children had their own ideas, of course, and quickly turned to the material they knew best, paper. The following year, when Karen revisited this classroom, teachers had provided children with a bin of found materials (e.g., cereal boxes, corrugated tubing, fabric, containers of all sorts) for making costumes, props, and toys.

Finally, understanding the literate potential of toys and the active storytelling that play uniquely provides is key to re-establishing play spaces in early childhood classrooms. During this study, children met School Literacy nexus expectations for storytelling and exceeded these when allowed to play and make films in the New Media Literacies nexus through an approach that builds on their strengths. They easily played and storied together when teachers recognized multiple pathways to literacy beyond print. Filmmaking and toymaking offered a range of modes to notice and a rich array of materials to explore.

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Paper Pterodactyls

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