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## Literacy Inquiry and Pedagogy through a Photographic Lens

*Photography becomes an effective tool for teaching, learning, and studying literacy in elementary school classrooms as students' photographs and the act of photographing provide new ways to problem solve and create more complex texts.*

**Hollingsworth:** *Wow! Your story on monster trucks really changed from your first draft. Why?*

**Alex:** *Well, we had to take pictures without any real monster trucks around to show, except we took pictures from books . . . [that] sort of make me think what we wanted to tell about in the story.*

**Hollingsworth:** *Did the Author's Chair feedback help?*

**Christian:** *Oh, yeah, because they asked us what we were trying to say in the writing. "Monster trucks are big trucks, or what?" I said, "Yeah, but that's not the point I was trying to make. I wanted to tell about . . . It's how you feel when you go to a monster truck show and see those trucks smashing cars and stuff . . . that's the important part."*

**Hollingsworth:** *Read me your opening paragraph.*

**Alex:** *"There is a monster truck named Bigfoot. It splashes through mud piles and roars down the dirty tracks. It drops all over junk cars, smashing them to smithereens [sic] before the crowd goes wild. It's the star of many performances on planet Earth."*

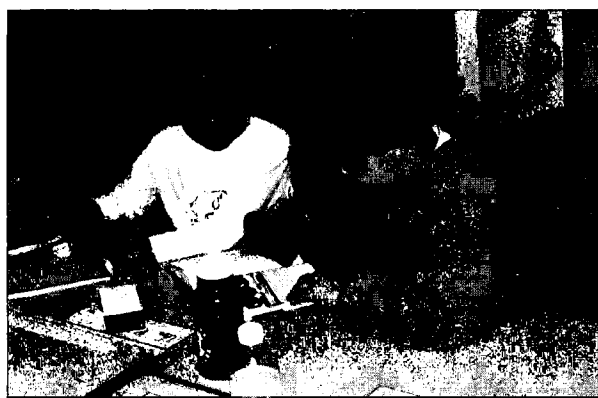


Figure 1. Photographing monster trucks

For Alex and Christian, the ability to move between communication systems (photography, oral language, and writing) helped construct and interpret meaning (see Figure 1). The composing process was enhanced through transmediation, when "learners retranslate their understanding of an idea, concept, or text through another medium" (Albers, 2006, p. 90). In the students' transmediation between sign symbols, the photographs served as process and product. The images were not substitutes for the written texts; they "enlarged and expanded meaning" (Seigel, 2006, p. 67). Integrating visual knowledge helped Alex and Adam problem solve and "think what [they] wanted to tell about in the story."

The writing changed from a description of the monster trucks to "how you feel when you go to a monster truck show and see those trucks smashing cars and stuff . . . that's the important part." The semiotic process energized their writing. The young writers focused on their narrowed subject (how you feel at a show) and demonstrated verbal acuity when composing "it's the star of many performances on planet Earth."

### PHOTOGRAPHY IN EDUCATION

Since the 1980s, qualitative research has gained respect in educational circles, albeit not without criticism. We are aware that the form of data representation affects what is communicated. Eisner reminds us that "there is an intimate relationship between our conception of what the products of research are to look like and the way we go about doing research" (1997, p. 5). Even so, researchers in education have not been quick to accept visual methodologies as tools for inquiry. In fact, use of still photography in educational settings has been limited (Allen et al., 2002; Bintz, 1997; Cappello, 2005, 2006; Dempsey & Tucker, 1994; English, 1988; Orellana, 1999; Orellana & Hernandez,

1999; Preskill, 1995). We believe photography has the potential to “enhance what is possible by amplifying what teachers are able to do . . . [and] by extending what students are able to produce as a result of their investigations.” Photography has the potential to help “change the ways in which students learn” (Schiller & Tillet, 2004, p. 401).

There are few notable models of photography in education. Bintz’s (1997) teacher research of the nature of curriculum at an alternate school included conversation and photographs as guiding data. He invited students to photograph what they thought was “most significant” (p. 35) about their school. Bintz used photography as a way for his students to “participate vicariously” in the research process (p. 34). Students were typically enthusiastic about participating and created images that confirmed the school’s overriding goal of providing a safe and supported learning environment. Orellana and Hernandez (1999) offered cameras to first-graders during neighborhood literacy walks that focused on environmental print. Students used the cameras to read their world and composed images that captured places of significance to them. Later, these photographs were used in the classroom to generate new literacy events through writing and dictation. Building on the work of Prosser (1998), Hollingsworth used visual images to document the quality of changes in an urban school Professional Development School (PDS) focused on literacy development. When quantitative reading scores placed the school at the bottom of the district’s assessments, Hollingsworth and colleagues introduced data that visually documented the confidence, spirit, and

resilience of the teachers and students. Those data earned the school a grant to design and implement a new literacy program that eventually raised test scores (see Gallego, Hollingsworth & Whitenack, 2001). Since the field of education lacks a rich photographic tradition, one purpose of this paper is to build the theoretical foundation for other educational researchers and to provide an example in literacy where we feel visual research is especially well suited. Specifically, we will explore the role photography plays in mediating and representing meaning in classroom literacy experiences.

## THEORETICAL FRAMEWORK

### The Nature of Photography

Sontag (1977) reminds us that when we photograph, we “confer importance” (p. 28). Regardless of the reason we choose to create an image, it has relevance or importance, and except in the case of art, is used for another purpose. However, importance as portrayed through the lens of the camera is not an objective idea. For many, photography still carries positivist notions that it depicts an objective reality. Collier and Collier (1986) praise the camera as an “instrumental extension of our senses, one that can record on a low scale of abstraction” (p. 7).

If we begin by thinking there is one objective reality to represent, then exercises in photography are not helpful for inquiry in education. However, Eisner pointed out that alternative forms of data representation might provide “productive ambiguity . . . more evocative than denotative . . . [I]n its evocation, it generates insight and invites

## Tips for Teachers

- Disposable cameras are good for beginners but are very expensive to process. A couple of inexpensive digital cameras can serve the same audience as 10–15 disposables.
- Use a cart similar to the one your overhead projector is on. Keep cameras charged so they can be used for teachable moments in the classroom.
- Digital photography teaches critical composition and allows more freedom to “shoot away.”
- Allow students to make editing decisions. Just like writing, teach students *how* to revise, and then trust them to make decisions that will demonstrate their voice or vision.
- Establish common vocabulary. As Cowen & Albers (2006) say, “The more learners understand the tools, techniques, and language of a sign system, the better they are able to integrate it with the texts that they produce” (p. 15). To understand photography tools and techniques, start with these:
  - **Vantage Point:** bird’s eye view, long shot, close-up, etc.
  - **Framing:** foreground, background, etc.
  - **Composition and Elements of Design:** line, shape, pattern, color, contrast, scale

—Marva Cappello and Sandra Hollingsworth

attention to complexity" (1997, p. 8). Photography offers students an alternative way to respond to text, moving beyond positivist notions of photography depicting a literal truth.

Indeed, photography is best used where there is an understanding that reality is perceived or constructed (English, 1988), and that photographs reflect, in some ways, the person behind the camera lens. Like researcher-writers, researcher-photographers make decisions, based on experience and theoretical perspectives, that influence the outcome of their reports. The image cannot be separated from its creator. English, like Lincoln and Guba (1985), recognizes that "generalizations cannot be freed from the human context from which they sprang" (English, 1988, p. 9). Furthermore, English acknowledges this connectedness as an asset of the medium.

Walker (1993) offers another advantage of visual information. He described the medium as a "silent voice" for the researcher: another language we can employ in constructing understandings and communicating them to others. Photography is offered as a researcher's dialect for discussing complexities that cannot be sufficiently captured in oral or written language. By acknowledging a "vision" or a "voice," Walker includes the photographer in the photograph. The photographer remains in the tones of a black-and-white image, in the deliberate framing, in the choice of the exact moment to release the shutter. Sometimes the image of its creator may lie latent, but it is there nonetheless.

Becker, who has been writing about photography for over 20 years, emphasizes that our understandings of photographs are situated. "Photographs get meanings, like all cultural objects, from their context" (Becker, 1995, p. 8). Photographs have no meaning in and of themselves. What helps us understand them more than content alone is context (Becker, 1995). Another way of looking at context is to examine the situations where we study. Elementary classrooms, for example, are layered with activity in geography and discourse, but their nature makes them difficult to observe. Looking at multiple activities with multiple participants over time is very difficult for the classroom ethnographer, yet that is precisely what we must do to capture some essence of the classroom culture under study. "The unique agility and flexibility of the still camera in revealing a

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rich fabric and texture of complexity in one brief moment, which can then be examined again and again, exceeds the ability to commit the moment to paper during or after studying a social setting" (English, 1988, p. 14). This additional data source allows us to take our inquiry further. Secondulfo (1997) tells us, "This ability to 'freeze' pieces of reality in forms to which other, subsequent, methods of research can easily be applied is an advantage of photography which cannot be renounced" (p. 34). He also discusses ways to use photographs

with participants as a way to elicit data. One method he illustrates, which will be fully developed later in the paper, is the photo-interview—an interview process that uses images to guide conversations and elicit data. We believe one of

photography's greatest strengths is this ability to be a source of data as well as a tool for eliciting data when employed as a stimulus.

### **Transmediation: Moving between Sign Symbols**

Transmediation, the process of interpreting meaning from one sign system to another, is central to understanding the possibilities of photography in classrooms. This shifting or spiraling between communication systems "increases students' opportunities to engage in generative and reflective thinking because learners must invent a connection between the two sign systems" (Seigel, 1995). Students mediate between the signs to make sense and represent meaning. When students are given opportunities to represent meaning semiotically, their literacy skills, including thinking, are enhanced (Albers, 2001). However, this is not a simple process. It is not translation; it is transformation. We wanted to know if photography is an effective communication system for transmediation within a semiotic classroom curriculum.

The classrooms where we studied provided a range of sign systems, including written and visual "texts" (Alvermann & Hagood, 2000) for students to use in meaning making. This was important to us because, like Short & Kauffman (2000), we believe "students need to have many ways of thinking and sharing available to them in order to engage more fully in pursuing questions within the classroom that are significant in their own lives" (p. 43). The sign systems (writing, oral

language, and photography) and the way students moved between them were interesting because they are distinct tools for communication with different potentials for meaning (Eisner, 1994).

## THE RESEARCH STORY

Photography seemed a natural approach to use in the classrooms because of our backgrounds. Cappello has a Bachelor of Fine Arts in photography and worked in the field as a camera assistant, photo-librarian, and photographic fine art collection consultant. Hollingsworth's interest in photography is more experiential: her father was a photographer and her first job as a teenager was in a photo lab that processed black-and-white film. Later she acquired her own lab and used photographs to illustrate her academic texts (see Hollingsworth 1978 and 1994). Our photographic knowledge helped us be successful with the medium because the more we know about any communication system, the easier it is to use it for mediating and representing meaning. "When constructing multimodal texts, meaning makers intentionally choose media with which they are familiar, and/or the media that will enable them to say what they want to say" (Albers, 2006, p. 78). However, extensive knowledge of photography is not necessary in order to use it for literacy instruction. Indeed, even with our grounding in photographic arts, we noticed our own perceptions evolve as we utilized these new approaches.

Our studies were situated in similar California classrooms. Cappello studied a combined second- and third-grade classroom at the Bridge School, a unique public school located in urban southern California. The ethnically and economically diverse student body was divided into multi-age classes guided by two teachers. Randolph Elementary School, where Hollingsworth studied, was very similar to the Bridge School, except that it was comprised of stand-alone grades and single teachers. Located in an economically disadvantaged part of a northern California city, the students were African American, Pacific Islander, White, and Latino. Seventy percent of them had first languages other than English.

### Participant-Made Images

In Worth and Adair's (1977) now classic anthropological film footage, researchers trained seven

Navajo men and women on the workings of a 16 mm camera and sent them off to photograph life on their reservation. These were the first images created from the insider's perspective. They "produce[d] images of their own conception of their world and their place in it" (Collier & Collier, 1986). Those of us concerned with representing participants' ideas through their own voice find the idea of participant-generated images very exciting. By allowing the participants the tools they need for expression, researchers are offering them another language to convey their ideas (Walker, 1993). This approach can be just as powerful with still cameras, in that they also allow the researchers an opportunity to see the insiders' view and (in our story) learn how young writers see their literacy practice and their world at school.

Building on Walker's (1993) ideas and Bintz's (1997) seminal study, Cappello offered students disposable cameras as a tool to discover what the students see in their classroom literacy practices. The cameras provided an alternate means for students to express important ideas about the writing process, free from the constraints of typical school participation structures. In addition, Cappello noticed that when composing written text, some students struggled for expression through limited language development, searching for words to suitably match their ideas. The photographs spoke for these students.

Cappello asked students to photograph "important" writing while she was away from the classroom at a professional conference. She assumed the students would create images of important writing processes such as conferences, research, and author's chair. These are elements of classroom writing *she* considered important and portrayed as important to the students. Instead, the students created image after image of their own written products (see Figure 2), reminding us of Sontag's notion that simply by photographing, we make something important. The students also photographed images of the work hanging in the classroom, thus capturing the artifacts the teachers deemed important enough to display proudly.

These unexpected results challenged Cappello's perceptions about classroom writing and reminded her how students' perceptions were at the center of this research. The students' photographs also taught

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Figure 2. Participant's "important" writing

her that it is not enough to provide classroom literacy experiences where students construct meaning across sign systems. Students must be taught about the new modes of communication. Indeed, "the more learners understand the tools, techniques, and language of a sign system, the better they are able to integrate it with the texts that they produce" (Cowen & Albers, 2006, p. 125). The student-generated photographs, along with researcher-generated images, were later used to further clarify perceptions in a series of photo-interviews.

Hollingsworth had a different purpose for offering cameras to her students. She asked students to take photographs to visually represent their perceptions of the meaning behind their writing: ideas they wanted to share with others using images instead of words. At the time Hollingsworth overviewed the setting,<sup>1</sup> it became clear that the students had already chosen topics and were engaged in the writing process. Final published papers were anticipated after 2 or 3 weeks of writing and revising. Hollingsworth thought this was an ideal time to give students cameras; she hoped the pictures students took would help them turn their intended meaning into written meaning.

The excited students exercised patience as Hollingsworth took the "Author's Chair" to explain the procedure. With their teacher's guidance, they role-played the kind of things they might photograph—"since my real little sister isn't

<sup>1</sup>Early stages of ethnographic research usually include an orientation to the study setting. When a researcher overviews the setting, she or he becomes familiar with its physical characteristics and geography. The researcher may also identify interaction patterns of various sorts and survey the community's artifacts and tools that are readily displayed.

here, you play her part like this . . . [demonstrates] and I'll take your picture." When students were stumped about what to shoot, suggestions were plentiful. For instance, one student commented, "I don't think I can photograph my story, because it's about a very rare car, the Lamborghini. . . . there are few left." Other students suggested: "You could take a picture of a Mustang and show how it's different." "You could take a picture of someone pretending to drive a Lamborghini . . . what they'd be wearing, and how they would look." Hollingsworth interjected at that point. "What is it you want the readers of your paper to know?" The student responded: "How sporty and fast it [the Lamborghini] was. How only rich people could have it." Hollingsworth asked, "How could you do that?" By the end of their conversation, the students had their questions about the task answered and were able to repeat the directions for operating the cameras and photographing their ideas.

This conversation began the transmediation process. Students used oral language to mediate meaning and clarify ideas they wanted to represent in their texts. The discussions prepared students for work with another communication system (photography) and facilitated problem solving in more complex ways. "Semiotic texts are always generative; that is, they have the potential to extend the initial meaning of the sign-maker (Kress, 1996).

Students worked in pairs (determined by similar topics) to photograph perceived "meanings" of their work inside and outside of the classroom. Hollingsworth also photographed students as they worked, noting how their original topics changed shape because of their visual explorations. By compiling the photos with their developing drafts over time, she was able to determine how the photographs changed their perceptions of the writing task. One example came from a pair of boys whose topic was "Squash Ball." The initial draft before the photography sessions included just the rules. After reenacting the game to photograph it, the writing became more spirited. "When it is time for recess somebody grabs the ball and speed out the door because he or she is so excited for squash ball. I jammed my finger once, but I still like squash ball." Author's Chair followed, and the students pressed the authors to talk about their perceptions of the meaning in their stories, as well as how to expand on the work. This spiraling between written, visual, and oral sign systems continued over the next two weeks



Figure 3. Writing in the workshop

as students made additional revisions to their work (see Figure 3), and circled back through Author's Chair for more feedback. The transmediation process informed and amplified students' texts. Like Cappello, Hollingsworth used the student-made and researcher-made photographs for photo-interviews conducted to clarify and expand on research understandings.

### The Photo-Interview

The photo-interview is one of the most widespread uses of photography for qualitative inquiry (Bunster, 1977; Cappello, 2005; Collier & Collier, 1986; Dempsey & Tucker, 1994; Preskill, 1995; Secondulfo, 1997; Wagner, 1979), yet it has not been well developed in the field of education. Photographs prompt participants to attend to ideas they might not have talked about (Bunster, 1977; Dempsey & Tucker, 1994; Orellana, 1999; Orellana & Hernandez, 1999; Secondulfo, 1997), focus the interview (Collier & Collier, 1986; Wagner, 1979), serve as a memory check (Bunster, 1977; Collier & Collier, 1986; Wagner, 1979), and a member check for researchers drawing conclusions from data (Bunster, 1977).

The idea of photo-elicitation is especially useful when interviewing students who have preset ideas about the dynamics of interacting with adults (Cappello, 2005; Dempsey & Tucker, 1994; Preskill, 1995). Interviews are complicated by the school setting where students perceive the researcher in a teacher-like fashion and the interview as part of "doing school." In this context, it is not uncommon

for researchers to report difficulty in interviewing for significant information. Students are quick to feed researchers responses they think are the "best answers" at school or the answer they believe their teacher would most like to hear from them.

Cappello used photographs to structure her conversations about literacy. Indeed, the images led the discussions and engaged the students in the interview process while she used an open-ended protocol. The photographs helped put the students at ease. Cappello used the participants' pictures (both depicting the students and created by the students) to initiate the interviews and establish immediate rapport, making it possible for the students to challenge traditional school discourses. For example, when Cappello asked one student if he thought any of the pictures were important, instead of repeating the expected school discourse ("Yes, the ones that [the teacher thought] were important"), he responded, "No, do you?"

The photographs also acted as tools to understand student learning. For example, when Cappello asked another student why he picked one specific image of a writing sample as important over another, he responded, "Here's one of my first stories; you can see about a million mistakes and eighteen staples. . . . this [photo of the final draft] shows how much I learned since the beginning of the year." During the 20–30-minute interviews, Cappello asked students to select, sort, and rank the photographs. This process enabled students to engage in preliminary analysis with the researcher, providing a means for getting to a deeper view of the participant's perspectives.

Once the students had completed their written texts, Hollingsworth scheduled photo-interviews with eight students representing the demographics and writing abilities of the class. Students were able to express their perceptions and ideas more clearly than they had before Hollingsworth introduced the experiment.

**Hollingsworth:** *I thought you were writing about great monuments in the U.S. Why did you take this picture of your teacher writing on the board?*

**Student:** *Because we couldn't do this writing without her help.*

**Hollingsworth:** *So after you took the picture, you revised the story to include that.*

**Student:** *Yes.*

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Figure 4. Questions from the Author's Chair

**Hollingsworth:** *Tell me about these pictures of your friend playing like she's a dog, then putting her head on your shoulder.*

**Student:** *Well, I was just going to write about how my dog looked and what he ate, but taking the pictures made me remember how my dog also makes me feel. So I asked the dog [her partner] to snuggle close with me while someone else took the picture.*

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**Hollingsworth:** *Your story changed from writing about Lamborghinis to stories about your friends from Nicaragua and India and the cars they liked. Why?*

**Student:** *Well, we looked for cars to photograph around the school, and we just started talking and found out that cars were different in the places we came from. So we changed it to that.*

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Previous perceptions about pets, Lamborghinis, and the writing task were all challenged through the semiotic process. In the students' transmediation between sign symbols, the photographs were both process and product. Photographs and the photographic process provided the stimulus for writing, extended the meaning of the original texts (drafts), and encouraged complex thinking. "Knowledge about language was reconsidered in light of knowledge about image" (Cowen & Albers, 2006, p.135). Participating as photographers in preparing their drafts led to deeper perspectives about their topics. In other words, giving students cameras and asking them to visually show what they really wanted to express in their writing enriched the results. "Learners used one sign symbol to mediate another," thus achieving generative and reflective power (Seigel,

2006, p. 70). Revisions of initial topics that took place *after* making decisions as a photographer helped students go much deeper to represent meaning. Their teacher was amazed.

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**Teacher:** *In this set, I can see where [student x] started with just a description/list of what national monuments were, to incorporating the process of how they came to know what the monuments meant. . . . they apparently got that from my lessons!!! . . . and how they really felt about the monuments. . . . In that team, one student posed as the statue of liberty, while the other photographed. The photographer kept directing the pose: "torch [upside down plastic cone] needs to go higher, up . . . up . . . like when you think about what that statue meant to all the new people coming to this country. . . . their feelings got higher and higher." Fascinating! I can see how I was really promoting shallow or superficial writing before!! Never again!!"*

## DISCUSSION

In this study, photography served as a research tool for getting an insider's view of the classroom writing community in two ways: through participant-made images and photo-interviews. While there are many methods for tapping participant's understandings, cameras allowed the young students another language for conveying their ideas. In other words, photography was an effective communication system for transmediation in a semiotic literacy curriculum (see Figure 5). Students' photographs and the act of photographing enabled them to problem solve in new ways and to create more complex texts. Literacy thinking and writing was enhanced when students engaged in experiences that encouraged them to translate meaning across sign systems. Photo-elicitation was especially useful for interviewing young students. The photographs helped students create narratives about their writing process and products, including ranking images systematically by their perceived importance. As the students reflected, they told stories about their own relationship to what was in the images and what was left out of them. Photographs cannot be separated from the photographers who create them.

The advantages of employing visual methodologies cannot be denied. "There is little doubt that photography can enhance students' (and teachers') responses to the demands of learning" (Ewald and Lightfoot, 2001, p.119). Considering the impact

**Classroom Uses**

- Build and Manage Communities (e.g., “All about Me” activities, job boards, “Where Am I in the Writing Process?” checkpoints)
- Create graphs and charts across the curriculum
- Visual assessments (e.g., Which photograph shows sedimentary rock?)
- Visual thinking strategies (Housen, 2002)

**Figure 5.** *Uses for photography in the classroom*

of visuals in our students’ worlds and the potential for teaching and learning, using photography (and other visuals) in classrooms is clearly important and beneficial. We encourage educators at all levels to explore the utility of the photographic medium for expression across educational contexts.

**References**

Albers, P. (2001). Literacy in the arts. *Primary Voices K-6*, 9(4), 3-9.

Albers, P. (2006). Imagining the possibilities in multimodal curriculum design. *English Education*, 38, 75-101.

Allen, J., Fabregas, V., Hankins, K. H., Hull, G., Labbo, L, Spruill, H., et al. (2002) PhOLKS lore: Learning from photographs, families, and students. *Language Arts*, 79, 312-322.

Alvermann, D. E., & Hagood, M. C. (2000). Critical media literacy: Research, theory, and practice in “new times.” *Journal of Educational Research*, 93, 193-205.

Becker, H. S. (1995). Visual sociology, documentary photography, and photojournalism: It’s (almost) all a matter of context. *Visual Sociology* 10(1-2), 5-14.

Bintz, W. P. (1997). Seeing through different eyes: Using photography as a research tool. *Teacher Research*, 5, 29-46.

Bunster, X. B. (1977). Taking pictures: Field method and visual mode. In Wellesley Editorial Committee (Eds.), *Woman and national development: The complexities of change*. Chicago: University of Chicago Press.

Cappello, M. (2006). Under construction: Voice and identity development in writing workshop. *Language Arts*, 83, 478-487.

Cappello, M. (2005). Photo interviews: Eliciting data through conversations with students. *Field Methods*, 17, 170-182.

Collier, J. Jr., & Collier, M. (1986). *Visual anthropology: Photography as a research method*. Albuquerque: University of New Mexico Press.

Cowen, K., & Albers, P. (2006). Semiotic representations: Building complex literacy practices through the arts. *The Reading Teacher*, 60, 124-137.

Dempsey, J. V., & Tucker, S. A. (1994). Using photo-interviewing as a tool for research and evaluation. *Educational Technology*, 34 (4), 55-62.

Eisner, E. W. (1994). *Cognition and curriculum reconsidered*. New York: Teachers College Press.

Eisner, E. W. (1997). The promise and perils of alternative forms of data representation. *Educational Researcher*, 26(6), 4-10.

English, F. (1988). The utility of the camera in qualitative inquiry. *Educational Researcher*, 19(4), 8-15

Ewald, W., & Lightfoot, A. (2001). *I wanna take me a picture: Teaching photography and writing to children*. Boston: Beacon Press.

Gallego, M., Hollingsworth, S., & Whitenack, D. (2001). Relational knowing in the reform of educational cultures. *Teachers College Record*, 103(2), 240-266.

Hollingsworth, S. (1994). *Teacher research and urban literacy education: Lessons and conversations in a feminist key*. New York: Teachers College Press.

Hollingsworth, S. (1978). *The Atlantic: Copper and community south of Portage Lake*. Hancock, MI: John H. Forster Press.

Housen, A. C. (2002). Aesthetic thought, critical thinking, and transfer. *Arts and Learning Journal*, 18(1), 99-132.

Kress, G. (1996). *Reading images: The grammar of visual design*. New York: Routledge.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Orellana, M. F. (1999). Space and place in an urban landscape: Learning from children’s views of their social worlds. *Visual Sociology*, 14, 73-89.

Orellana, M. F., & Hernandez, A. (1999). Taking the walk: Students reading urban environmental print. *The Reading Teacher*, 52, 612-619.

Preskill, H. (1995). The use of photography in evaluating school culture. *Qualitative Studies in Education*, 8, 183-193.

Prosser, J. (1998). *Image-based research: A sourcebook for the qualitative researcher*. London: Falmer.

Schiller, J., & Tillet, B. (2004). Using digital images with young children: Challenges of integration. *Early Child Development and Care*, 174, 401-414.

Secondulfo, D. (1997) The meaning of things: A working field for visual sociology. *Visual Sociology*, 12(2), 33-45.

Seigel, M. (1995). More than words: The generative power of transmediation for learning. *Canadian Journal of Education*, 20, 455-475

Seigel, M. (2006). Reading the signs: Multimodal transformations in the field of literacy education. *Language Arts*, 84, 65-77.

Short, K. G., & Kauffman, G. (2000). Exploring sign systems within an inquiry system. In M. A. Gallego & S. Hollingsworth (Eds.), *What counts as literacy* (pp. 42-61). New York: Teachers College Press.

Sontag, S. (1977). *On photography*. New York: Farrar, Straus and Giroux.

Wagner, J. (1979). Introduction: Information in and about photographs. In J. Wagner (Ed.), *Images of information: Still photography in the social sciences* (pp. 11-22). Beverly Hills, CA: Sage.

Walker, R. (1993). Finding a silent voice for the researcher: Using photographs in evaluation and research. In M. Schratz (Ed.), *Qualitative voices in educational research* (pp. 72-92). London: Falmer.

Worth, S., & Adair, J. (1977). *Through Navajo eyes: An exploration in film communication and anthropology*. University of New Mexico Press.

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