

Technology in the Creative and Participatory Literacy Practices of a Second Grade Classroom

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Abstract: In this paper we focus on the roles technology played in language and literacy learning activities within a 2nd grade classroom at Zapata Elementary, a school of more than 400 students located in a metropolitan area in the Southern United States. We identify and examine a range of creative and participatory practices that we witnessed over a three month period –describing and theorizing about the way various available technologies were used.

Motivation, Background, and Conceptual Framework

According to recent national and local reports (Lanahan & Boysen, 2005; Malerba, n.d.), barriers to utilizing technology in educationally transformative ways remain conspicuously in place. The redemptive promise of technology in public education is one of the most powerful and accepted discourses in modern US society (Oppenheimer, 2004). A long line of inventions from the radio, to film and television up through contemporary desktop, laptop and handheld digital computing have all been hailed as innovations capable of revolutionary change in public schools (Cuban, 2003, 1986). Whether these promises were: supplemental or supplantational, purport better learning efficiency, bottomless drill and practice, higher levels of motivation, more learner control, individualization, or cost reductions (Cuban, 1986, 2003), the overall message is one of diode-delivered hope.

Nearly ninety years after educational technologies first entered public discourses and public schools, 58% of elementary school teachers and 54% of foreign language/bilingual/ESL teachers reported acceptable levels of technology in their classrooms (Lanahan & Boysen, 2005). Yet despite the rising presence of technology in classrooms, public school educators identified having a teacher workstation for sending and receiving email as essential more often than classroom internet access. Additionally, they rated the presence of a classroom telephone as essential more often than computer-based reference resources or a 4:1 student to computer ratio (Lanahan & Boysen, 2005). In other words, instead of using technology to make new and wonderful things possible, they have marshaled its services largely within existing school structures to incrementally streamline traditional practices (Cuban, 1986, 2003).

Researchers have attempted to overcome this disparity through a belief that educational technology as a field had simply not yet hit upon the right design (Zhao, Pugh, & Sheldon, 2002). Others sought to examine the issue through the use of historical and survey data (Cuban, 2003) in order to identify the underlying systemic challenges. While both of these efforts have yielded useful findings, they do not provide the sort of thick description (Geertz, 1973; Ryle, 1971) or experiential grist necessary to move away from a focus on: barriers to transformation, design superiority, teacher, parent, or student attitudes about design *x* or technology *y*. In our opinion, what was missing was the type of thick description that ethnographic methods work to describe and theorize in a more inclusive,

interpretivistic, critical, and rhizomatic way about the 'how' and 'why' of educational technology utilization (Zhao & Frank, 2003, p. 5).

Object of Inquiry, Context, Method, and Procedures

This paper addresses the call of Greenhow, Robelia, & Hughes (2009) for inquiry into how emerging technologies impact the creative and participatory practices of learners, herein we use data from our initial efforts to understand classroom technology use during language arts, literacy, and ESL activities in a second grade ESL classroom. The ethnographic spirit of our inquiry supports our interest in observing a broad range of classroom practices. By looking to better understand a form of the ethnographic question: 'What's going on?' (Wolcott, 2008) or 'How will things unfold?' (Thorp, 2005) we are able to identify, navigate, and analyze some of the larger issues at the intersection between technology and literacy within a particular primary school classroom. This methodological approach is a partial response to those in the field who have encouraged a more holistic or expansive orientation toward research in education and technology (Zhao, Pugh, & Sheldon, 2002). Ethnography allows us to ask, 'what's going on' first as a way to contribute to the field at large and second, as a way to inform our emerging technology design and development efforts (Barab, Thomas, Dodge, Squire, & Newell, 2004).

The context and research site for this project is a 2nd grade, self-contained, classroom on the campus of Zapata (pseudonym) Elementary. The school, which serves more than 400 students, is located one mile east of a major interstate and less than 3 miles from city center. The neighborhood around the school is a mix of houses, apartment complexes, repair shops and brick buildings –many of which have bars on the windows. The words 'for lease', 'se vende', and 'for sale' are written in black spray paint on some of the street-facing walls of the nearby retail spaces. A 35,000 square foot iron and alloy foundry is located within 50 meters of the school emitting a fine mist of acrid, metallic particulate.

During a period of three months, we have spent over 20 hours in *participant* observation (DeWalt & DeWalt, 2002; Spradley, 1980). In order to better understand the creative and participatory practices present in the various aforementioned settings, we went beyond detached observation (Spradley, 1980) to a more participatory or involved form of inquiry (Vasudevan, 2006) into the changing, nuanced literate landscapes of the classroom. To that end we interacted with the students and Julia, the classroom teacher. We made comments, made copies, and made ourselves scarce during testing. We reshelfed books in the library, asked questions, helped struggling students with their writing, and tried, unsuccessfully, to replace the bulb in an old Acer LCD projector. We also spent time engaged in informal questioning (Weiss, 1994; Wolcott, 2005), and artifact collection (LeCompte & Preissle, 1993). We observed computer lab activities, language arts instruction, test preparation, center time, and homework reviews. Each of us kept field journals wherein we kept jottings (Emerson, 1995) which we turned into expanded fieldnotes. In terms of data analysis, we met every Saturday afternoon over the course of our fieldwork to discuss research issues. We followed an iterative analysis (Anfara, K. M. Brown, & Mangione, 2002) beginning with an initial individual coding followed by group chunking and theming leading to theory development based on a constant comparative analysis of events and interactions (Strauss & Corbin, 1998).

Data / Description:

Although we had ideas about what constituted creative and participatory practices, from the very first day we were forced to expand our notions based on the complicated ways devices as seemingly simple as stopwatches were used by students during literacy activities. The following is an excerpt from our expanded fieldnotes, it serves as an example of the types of interactions we experienced during the three months we spent with Julia and her second grade students.

Why Won't It Stop?

On the first day of our observations Julia and her students had just returned to their classroom from the computer lab –after which they had their pictures taken in a make-shift hallway photo studio near the library. They filed back to the classroom a little after 9am. The classroom has four windows, two of them have their blinds drawn all the way down with several literacy posters taped to them. The other two windows have their blinds down only 3/4s of the way –letting in a hint of the buildings across the street between the raindrops that dot the glass.

Fifteen minutes later they had finished going over yesterday's homework which most days was the first activity of the morning.

"Pass the papers to your team captain, we're going to do some fluency reading," said Julia as she collected the now-corrected worksheets from the students at the table next to her.

"What we're going to do is our fluency reading. Remember when we did it last time, when we read the story, wrote about it, and then timed ourselves? This time we're going to read the story, time ourselves, and then write about it, which makes more sense."

Several students move to different tables with minimal to no direction. In the meantime, Julia peels mini yellow sticky notes off of a pad of them one at a time, handing them to the students while she continues to talk about the activity. *"Remember when we time, one of you reads, one is timing, then we switch places."*

Each partner group is supposed to write down the number of minutes and seconds that it takes each of them to read all the words of a story on a specific page.

"What are we doing first, new story or old story?" asks Julia.

"Old story," a few students respond.

"Okay, you guys are level 3 right?" Julia says as she passes out leveled readers to each pair.

"Yeah"

"We're level five," says a student in another group.

Near the front of the room, a boy in a faded white polo shirt is staring at the blades of pair of scissors as he opens them wide and then snaps them shut again.

"What level are you two?" Julia asks him. *"Does this look okay?"* she says, not mentioning the level of the reader, prompting him to read. He reads a sentence while she listens.

"Was that too hard or just right?" she asks the boy with the scissors.

He looks up at her.

"It was just right, you had a few problems but not too many, right?" Julia says as she moves across the room toward a cardboard box.

"Practice it for about 2 minutes and then I'll be giving you the timers."

A few minutes later all the students have green, blue, and yellow plastic timers. And they take turns reading and recording each other's times on the stick notes. Meanwhile Julia moves around the room listening in, peeking at their recorded times and troubleshooting.

"Sweetie you hit mode" says Julia as she consults with a student who is trying to figure out why his timer didn't start when he pushed one of its buttons.

"Why won't it stop?" says a girl to her partner, they are huddled together looking at the digital display framed in bright plastic. As they try and figure it out Julia moves over to the boy who was playing with scissors earlier.

“Okay JT, right now you’re pressing start and stop and start and stop, you’re acting a little weird right now.” Julia invites him to spend some time away from the other students near the door. *“Use this timer,”* she says, crouching down next to him, handing him a small plastic hour-glass, *“let it run out, if you’re still feeling a little strange turn it over again”* before she gets up to leave she asks, *“are we in trouble right now? No.”*

“Stop, stop, stop!” says a student.

“I’m going to press this and then press this” says another, his partner with both hands on her book poised to begin.

“I’ll tell you to go,” he says pausing slightly, *“GO”*

She looks down and begins reading the first sentence.

“No wait,” he says staring at his timer, *“okay go.”*

Instead of starting over she just looks at him and takes the timer back

“Okay just so you know bud that’s kind of a weird time,” says Julia looking down at the sticky note in front of a student, *“we don’t have 33:88.”*

The rest of the room continues reading.

“Oh, we don’t write those mini seconds,” says Julia, *“that’s really fluent, that means you read 99 words in a minute.”*

“Okay eyes on me timers down, timers down, timers down.”

“My frustration level is getting high,” says Julia.

There’s a knock at the door, the Title I reading coordinator comes in and collects three students.

“Close up your books and next time we’re going to start on the next story.”

Major Themes and Findings:

In our analysis, the tension between creativity and production, between exploration and progress was prominent. As both second grade teacher and campus technology coordinator, Julia had the daunting task of living up to pressure to champion technology as a creative outlet among her peers while demonstrating how it could meet the needs of learners. During our observations she and her students used LCD projectors, a classroom Elmo, digital timers, MS Word, Comic Life, MS Paint, and cassette players in a range of language arts contexts. What seemed consistent was the need to constrain that interaction toward a concrete purpose which often led to the creation of learner-made artifacts which could be taken home or displayed outside the classroom and were readily identifiable as the culmination of one or a series of educational episodes.

We observed a tension between step-wise control of technology interaction and moderately-constrained uses of technology during literacy activities. Such activities usually worked in concert with each other, building upon or complementing work completed during other parts of the school day from center time, to standardized test preparation. While students in general had more freedom during computer lab activities than classroom ones, both were highly structured and sequenced. For instance when they made a 6-panel nonfiction comic about an animal, they were able to choose from a pool of pictures and fonts, using pre-determined panel titles based on a template Julia created. Reflecting on our observations we found that as the number of functions performed or options offered by a particular technology increased so did the amount of participatory and creative latitude Julia gave her students.

Conclusion and Future Directions

The insights we gained during the data collection and initial analysis have strengthened our conviction that open-ended technologies hold untapped promise for supporting creative and participatory practices even and especially within language arts classrooms with high levels of teacher control. We are equally humbled by the complicated nature of technology integration as seen above when we describe an episode wherein the students use plastic, two-button timers. Going forward we plan to further analyze our fieldnotes and observational data in order to gain a more robust insight into technology use in Julia's classroom and beyond.

References:

- Anfara, V. A., Brown, K. M., & Mangione, T. L. (2002). Qualitative analysis on stage: Making the research process more public. *Educational Researcher*, 31(7), 28-38.
- Barab, S. A., Thomas, M. K., Dodge, T., Squire, K., & Newell, M. (2004). Critical design ethnography: Designing for change. Retrieved February 6, 2008, from <http://www.anthrosource.net/doi/abs/10.1525/aeq.2004.35.2.254>.
- Cuban, L. (1986). *Teachers and machines: The classroom use of technology Since 1920*. Teachers College Press. NY.
- Cuban, L. (2003). *Oversold and underused: Computers in the classroom*. Harvard University Press. Cambridge, MA.
- DeWalt, K. M., & DeWalt, B. R. (2002). *Participant observation: A guide for fieldworkers*. Walnut Creek, CA: AltaMira Press.
- Emerson, R. M. (1995). *Writing ethnographic fieldnotes*. Chicago guides to writing, editing, and publishing. Chicago: University of Chicago Press.
- Gee, J. P. (2005). *An introduction to discourse analysis: Theory and method* (2nd ed., p. 209). New York: Routledge.
- Gee, J. P. (2007). *Social linguistics and literacies: Ideology in discourses*. Hoboken: Taylor & Francis.
- Geertz, C. (1973). *The interpretation of cultures: Selected essays*. New York: Basic Books.
- Greenhow, C., Robelia, B., & Hughes, J. E. (2009). Learning, teaching, and scholarship in a digital age: Web 2.0 and classroom research: What path should we take now? *Educational Researcher*, 38(4), 246-259. doi: 10.3102/0013189X09336671.
- Lanahan, L., & Boysen, J. (2005). *Computer technology in the public school classroom: Teacher perspectives*. Issue Brief, National Center for Education Statistics. Retrieved August 7, 2009, from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2005083>.
- LeCompte, M. D., & Preissle, J. (1993). *Ethnography and qualitative design in educational research* (2nd ed.). San Diego: Academic Press.
- Malerba, C. (n.d.). *Internal report on the current level of technology usage by teachers*. Technology and Research, Texas.
- Oppenheimer, T. (2004). *The Flickering Mind*. Random House, Inc. NY.
- Ryle, G. (1971). *Collected papers*. London: Hutchinson.
- Spradley, J. P. (1980). *Participant observation*. New York: Holt, Rinehart and Winston.
- Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: techniques and procedures for developing*. Sage Publications Inc. Thousand Oaks, CA.
- Talburt, S. (2004). Ethnographic responsibility without the "Real". *Journal of Higher Education*, 75(1), 80-103.
- Thorp, L. (2005). *The pull of the earth: Participatory ethnography in the school garden*. AltaMira Press. Lanham, MD.
- Vasudevan, L. M. (2006). Looking for angels: Knowing adolescents by engaging with their multimodal literacy practices. *Journal of Adolescent & Adult Literacy*, 50(4), 252-256. doi: Article.
- Weiss, R. S. (1994). *Learning from strangers: The art and method of qualitative interview studies*. New York: Free Press.
- Wolcott, H. F. (2005). *The art of fieldwork* (2nd ed., p. 292). Walnut Creek, CA: Altamira Press.

Wolcott, H. F. (2008). *Ethnography*. Rowman & Littlefield. Lanham, MD.

Zhao, Y., & Frank, K. A. (2003). Factors affecting technology uses in Schools: An ecological perspective. *American Educational Research Journal*, *40*(4), 807-840. doi: 10.2307/3699409.

Zhao, Y., Pugh, K., & Sheldon, S. (2002). Conditions for classroom technology innovations. *Teachers College Record*, *104*(3), 482-515.