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A funds of knowledge approach to the appropriation of new media in a high school writing classroom

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Youths' learner-generated designs, instantiated in digital practices, spaces and artifacts, are underutilized in schools. Additionally, digital media tools are often taken up in reductive ways that serve to perpetuate deficit discourses for youth from nondominant communities, rather than reflect the creativity and innovation that youth practice within digital domains. To address these issues, this article shares a funds of knowledge approach to the use of new media in classrooms. Coupled with an emphasis on new literacies and multiliteracies, this approach was instantiated in partnership with Ms Smith and her high school writing classroom. The partnership engaged new media in order to appropriate and develop learner-generated designs in classroom spaces.

Keywords: new media; Latino youth; funds of knowledge; high school classroom; collaboration

Introduction

Despite much talk about the value and importance of new and digital literacies, teachers are often challenged by how to organize classroom participation with new media tools and practices, such as the use of social networks, instant messaging, wikis and mobile devices. In particular, the learner-generated designs, instantiated in digital practices, spaces and artifacts, that emerge in participatory "affinity spaces" (Gee, 2005) and in what Ito (2008) calls "networked publics" are underutilized in schools. An additional concern is that digital media tools are often taken up in reductive ways that serve to perpetuate deficit discourses for youth from nondominant communities, rather than reflect the creativity and innovation that youth practice within digital domains. To address these issues, this article shares a funds of knowledge (FoK) approach (González, Moll, & Amanti, 2005) to the use of new media in classrooms. Coupled with an emphasis on new literacies (Gee, 2009) and multiliteracies (New London Group, 1996), this approach was instantiated in partnership with Ms Smith and her high school writing classroom. Together, we engaged new media in order to appropriate and develop learner-generated designs in classroom spaces.¹

The study focused on learner-generated design for several reasons. FoK, new literacies and multiliteracies (NL&ML) and research in the learning sciences (Bransford, Brown, & Cocking, 2001) emphasize that classroom practices should anchor new learning within the

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lived experiences and prior knowledge of youth. Yet, the semiotic, meaning-making resources and new media tools that are utilized by youth outside of school, in their everyday and increasingly digitally mediated lives, remain underutilized in schools. While research has shown that a segment of youth engage with new media more robustly outside of school, many youth still need support in order to leverage their digitally mediated creativity and sociality for further learning (Ito et al., 2008; Kafai, Fields, & Hill, 2012). Within schools, in order to extend youths' practices, more examples are needed that demonstrate how to situate learning with new media within the social, cultural and historical context of students, especially for youth from nondominant communities.

In this article, I share how the collaborative redesign of a high school writing classroom was oriented toward the development of learner-generated designs through the study of and use of students' FoK, new media², and a focus on NL&ML. Like the original FoK research, the study was located in a city in the Arizona, US–Mexico borderlands region. The aim of a FoK approach is to support teachers and students in reimagining and incorporating the lived experiences, networks and practices of members of nondominant communities, or what are termed their FoK, as valid ways of knowing and powerful resources for academic learning. An underlying premise of FoK is that students' agency within the spaces that texts are enacted, for example, classrooms or social network sites, impacts possibilities for their learning. Through presenting the evolution of the work of this study, I argue that the development of academically robust learner-generated designs are well served by a FoK approach to the use of new media that: (1) situates teachers and learners as ethnographers of youths' experiences, (2) supports teachers and learners as co-designers of curriculum, and (3) expands the semiotic resources, tools and genres available for meaning-making in classrooms.

FoK: a methodology and concept

FoK is a collaborative approach to research and a way of envisioning the semiotic, meaning-making resources of youth and families, especially those with working-class backgrounds, as valuable resources for academic learning. FoK are conceptualized as the diverse practices and knowledge derived from the lived experiences of youth, families and networks of households enmeshed in thick relationships of exchange (González, Moll, & Amanti, 2005; Moll, Amanti, Neff, & González, 1992; Velez-Ibañez & Greenberg, 2005). Family practices in response to the circumstances of everyday life, as well as particular expertise, are understood as FoK (González & Moll, 2002). For example, the original study documented the labor activities and participation in informal exchange economies of families from nondominant communities. More recent research highlights FoK situated in youths' practices with new media and immigrant-heritage youths' responses to their position in a difficult sociopolitical context (Moll, Soto-Santiago, & Schwartz, 2013).

As a methodology, teachers or students, both independently or together, engage in ethnographic inquiries into community experiences and shared reflection on practice. In the original research, teachers conducted interviews and observations in households and participated in study groups with researchers. Through this process, they developed reciprocal relationships of trust with each other, families and community members. As Hogg (2013) discusses, subsequent studies extend the FoK model to include youth as FoK researchers (Calabrese-Barton & Tan, 2009), and to design curriculum to learn about and base classroom activities on youths' FoK (Dworin, 2006; Lee, 2007). Importantly, a critical component of any form of FoK research is that new curriculum and instructional approaches are developed through the participants' collaborative reflection on their evolving understandings of youth, family and community.

As a methodology and a concept, FoK is based on the idea that people live and learn culturally, using tools and signs to mediate their experience of the world (Vygotsky, 1978), but that no member of a group embodies a fixed, rigid and monolithic "culture" (González, 2005). Rather, a FoK approach emphasizes the processual nature of FoK as non-fixed social, cultural and historical practices (González, 2005) that evolve within changing sociocultural contexts. This is significant to keep in mind, so that FoK are not thought of as knowledge that one can "capture" to understand a particular person or group, and there is no one-size-fits-all recipe for instructional practice that can exist without the process of learning about students' lived experiences and histories.

Situating learner-generated designs in FoK and NL&ML approaches

FoK and NL&ML are complementary, sociocultural perspectives that emphasize that literacy and learning are situated in social, cultural and historical practices. In each approach, collaboration and networks are highlighted as an important feature of the social practices of communities and new digital and social contexts to be taken up for literacy learning in classrooms. New literacies emphasize the social practices evolving with new media, and often occurring outside of school (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2009; Lankshear & Knobel, 2007). Gee (2009) writes "the new literacies studies wants to talk about different digital literacies-that is, different ways of using digital tools within different sorts of sociocultural practices" (p. 12). Like multiliteracies, new literacies are about studying new types of literacy beyond print literacy, "especially "digital literacies" and literacy practices embedded in popular culture" (Gee, 2009, p. 11).

Multiliteracies (New London Group, 1996) present literacy as a design process that is multilingual and multimodal, a process of learning how to read and write multimodal texts that integrate other modes (e.g. audio, images, gesture). Cope and Kalantzis (2009) describe that with multiliteracies they introduced a dynamic, design-based approach to meaning-making in order to move away from fixed concepts of literacy and "available designs," or conventions of representation. In this study, available designs are defined as both the five-paragraph essay used in schools and formats indigenous to networked public spaces, or what Paris (2012) refers to as "identity texts," such as blogs, text messages and Facebook profiles. Significant to the development of learner-generated designs in academic spaces, in multiliteracies, literacy is a process of critical meaning-making, where available designs are remade through the negotiation of multiple discourses and modalities. The "redesigned" represents how through this process, "the world and the person are transformed" (Cope & Kalantzis, 2009, p. 175).

The research context and participants

Approach to collaborative research and classroom context

The participants and context

This work, like the original FoK research, took place in the Arizona, US-Mexico border-lands region, an area that historically has undervalued the FoK of Mexican-descent students and families. The partnership with Ms Smith and her class evolved during 2009–2010, an increasingly difficult political, social and economic time for Latinos in the state. The writing course Ms Smith taught was cross-listed with a local community college course and required three research essays; these became the focus of our redesign. Table 1 outlines the research participants and their roles in the research, an aspect I elaborate more on below.

Table 1. Research participants, background and roles.

Participant	Background and roles
Anonymized	 University researcher; researcher-teacher Curriculum designer (Unofficial) writing course co-instructor Study group co-facilitator
Ms Smith	 High school writing course teacher Teacher-researcher Curriculum designer Study group co-facilitator
Writing Classroom	 N=26 students, 23 12th graders and 3 11th graders, 88% Latino, Participants in classroom and digital spaces Researchers, writers
Storywiki students (Petra, Noli, Petra, Wendy)	 Storywiki after-school study group participants and writing course students Peer-group creators of multimodal narrative, "Storywiki," who initially created what became Storywiki as an oral- and image-based story Co-instructors for wiki project introduction lesson
Angelica	 Focal 12th grade student, 1st generation Latina student of Mexican descent From a town in Mexico to which many in the area were connected
Yolanda	 2nd generation, 12th grade Latina student of Mexican descent Lived with her sister because her parents were in Mexico

Ms Smith was a committed educator in her third year of teaching high school, and a white woman, like myself. I first met Ms Smith when I invited teachers and students to participate in study groups to address how to appropriate youth practices and new media for learning in classrooms. We began our collaboration as co-facilitators of an after-school club with several members of her class who wanted to further develop an oral and visual story based on their experiences and identities. Within the after-school space and a wiki, the students developed "Storywiki," a multimodal narrative on hundreds of pages. The study group and virtual space provided Ms Smith and I a place to develop our partnership and conduct participant observation of students' FoK. After Ms Smith observed the students' creative process, that she stated was more complex than any classroom work she had seen, she invited me to co-teach the second semester of the writing course.

Through our FoK approach to classroom activity, we discovered there was a good deal of diversity among the predominately Latino students, related to immigration history, language use, cross-border movement and socioeconomic class. Yolanda and Angelica were two students representative of the many class members who were first or second generation, Mexican-descent immigrants, whose families reached across the border, with varying consequences for the students. For Angelica, this meant frequent joyful visits for things like the planning of a cousin's *quinceañera* (15th birthday party). For Yolanda, it meant the stress of having to live on the other side of the border from her parents. After I present the evolution of the re-design process, I examine the trajectories of these two students below.

Approach the redesign of the classroom

The collaboration with Ms Smith's classroom was enacted as a form of what Reinking and Bradley (2008) refer to as a formative and design experiments. Formative and design experiments are an approach to research that involve interventions, guided by theory, and instantiated within authentic academic contexts that are meant to positively transform instructional practice. Like FoK work, researchers theorize practice situated in the context of the intervention that can inform educators and generate pedagogical understandings applicable beyond specific instances. FoK and formative and design experiments also converge upon use of ethnographic approaches for collecting data, and an orientation toward "change as the goal of educational research" (Moll & Diaz, 1987; in Reinking & Bradley, 2008, p. 28).

A critical component of formative and design experiments are the adaptive and iterative nature of the work, which Reinking and Bradley liken to "a prototype that is continuously tested and tweaked to improve its performance" (p. 20). Below, I describe how the intervention evolved within the classroom. I highlight key data sources that served to move the redesign of the classroom forward. I share the overlapping "microcycles" (Reinking & Bradley, 2008) of the intervention as a series of three phases, or component interventions, that highlighted different aspects of the FoK and NL&NM approach to the development of learner-generated designs in academic spaces.

Theoretical framework and pedagogical goals

Figure 1 operationalizes how FoK and NL&ML were taken up toward the pedagogical aims of the intervention as multimodal semiotic resources, social practices and collaborative relationships. New media use was as a critical component of the pedagogical aims (shown in Figure 1), and the ethnographic methods of the research.

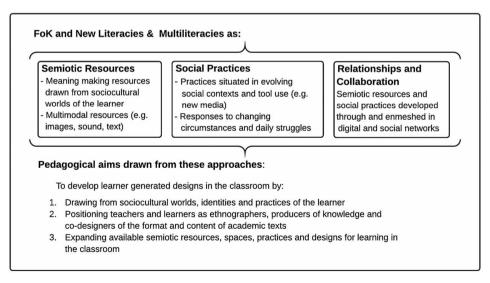


Figure 1. FoK and NL&ML operationalized for the formative and design experiment; the pedagogical aims of the intervention.

Designing the interventions

Ethnographic methods were used for data collection and for the redesign of the curriculum (see Figure 2). Ms Smith and the class were repositioned as ethnographers of youths' experiences and co-designers of academic spaces and texts. Figure 2 shows how participants engaged ethnographic practices in multiple contexts: the classroom social network (CSN) site, Storywiki and other in and outside-of-class spaces. Figure 2 also lists important elements that contributed to the development of reciprocal relationships among participants that supported students' agency in the design process.

Figure 3 outlines how the approach to the redesign was instantiated across the three phases of the intervention: (1) the design of digitally mediated spaces for Ms Smith and myself to learn about students FoK, (2) the design of digitally mediated spaces for students to engage their FoK as researchers of their own and their communities' experiences and finally, (3) the design of multimodal texts by the students that grappled with social issues related to their identities. Of significance, we used new media tools that were free and provided ways for students to participate regardless of uneven home and school technology access.

Each phase of the research was influenced by shared reflection between Ms Smith and myself, and analysis of students' work. I utilized a grounded theoretical approach (Glaser & Strauss, 2012) to coding and memo writing that informed the ongoing, iterative design of the curriculum and post-intervention analyses. Initially, I looked for ways in which students made connections to and recontextualized their FoK drawn from out-of-school spaces and activities within the CSN and the three redesigned classroom research essays. Later, I added the lens of transduction to my analysis, in order to examine how students moved semiotic material or content from one mode to another (Kress, 2003).

Phase 1: designing spaces to learn about students' FoK

In phase 1, Ms Smith and I were participant observers of students' practices within the Storywiki after-school club and wiki, and within the CSN site, renamed "Writers Wonderland" by the students. Table 2 shows the types of FoK that Ms Smith and I observed through students' use of the CSN and their development of Storywiki.

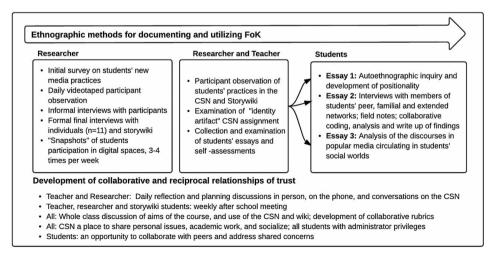


Figure 2. A FoK approach to ethnographic methods utilized by participants.

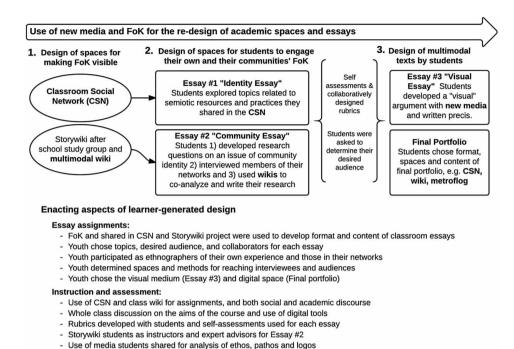


Figure 3. The use of new media and FoK for the redesign of the classroom toward learner-generated designs in the three phases of the intervention.

Learner-generated designs were a defining feature of these spaces. Storywiki students designed the format and content of their multimodal narrative. Ms Smith and I supported their work by providing the physical space of the afterschool club and offering the use of a wiki to develop their story. Likewise, for the CSN, we provided a digital space where we

Table 2. Types of FoK that circulated in the CSN and Storywiki that were taken up for the design of the essay assignments.

Semiotic resources Practices · Spanish, internet slang, stylized use of Voicing concerns and responses to issues of race, gender, and immigration language · Media representative of · New media practices: "friending," Social networks (e.g. picture of peers commenting, instant messaging, viewing and family) and posting media o Situated sociocultural resources (e.g. Speaking and writing in Spanish music that indexed borderlands region • Development of "identity texts" language resources and pop cultural Storywiki: genres)

- o Interests (e.g. sports, music, videogames, artwork)
- Multiple genres (viral videos, political satire, YouTube)
- o Racism, sexism, LGBT rights
- Collaborative meaning-making and negotiation of ideas in written dialogue, text and images
 Lies of interret slang and symbols, such
- Use of internet slang and symbols, such as XD and :) to soften the negotiation of different ideas in Storywiki
- Use of FoK, personal identity, new media and multiple modes to create a text

invited participation to come from the students' own interests and practices. We gave students administrator privileges and allowed them to use their mobile digital tools to access the site in class (students' mobiles were disallowed in class by school rules). To help us build what Lee (2007) calls "cultural data sets" or an understanding of FoK from which to base curricular approaches, we asked students to upload what they would consider an "identity artifact." We also held a whole class discussion and forum on the CSN to elicit students' goals for the use of the site. Angelica responded to a classmate confused about what we were offering to the students that it was a place to "learn what we waaant." In the conversation, she expressed an interest in posting Spanish language content and doing design work for the CSN.

Phase 2: designing spaces for students to engage their FoK

In phase two, we worked to design curriculum based off of our observations in the CSN and Storywiki. We chose "identity" as an organizing concept for the redesign of the three required research essays. This concept was selected to help students' draw from their socially and culturally situated identities and practices performed in digitally mediated "identity texts" (Paris, 2012) in order to analyze their lived experiences.³ Rather than defining identity for the students, we invited them to theorize identity through their work. To help, a nonfiction author, slam poet, visual anthropologist and photographer visited the classroom virtually and in person to share how they conceptualized identity in their work.

As part of a FoK approach, Essay 1 was designed to draw students into ethnographic practice and to begin to transfer responsibility to students for the design of their own learning (Rogoff, 1994). Referred to as the "Identity Essay," Essay 1 provided an entry point into developing "positionality," a component of critical ethnography that asks the researcher to reflect on how their perspective derives from their social history and shapes their observations (Madison, 2011). The essay was introduced to the students as an interrogation of their experience and identity, a kind of auto-ethnographic exercise. The assignment posed questions that students might ask themselves in order to situate their inquiry in their social, cultural and historical context. Ms Smith and I encouraged the students to tackle subjects, such as racism, "life after high school," music and creativity that had surfaced within their CSN participation. We also asked students to imagine that they were writing for their preferred audience.

Many students utilized their FoK in their essays through articulating their sense of "daily struggles" (von Kotze, 2002 in Moll et al., 2013). Their discussion mainly involved the hypocrisy that they encountered as Mexican-descent students in the borderlands. As Dany expressed:

When other people see me in the mariachi outfit I feel like they see the good side of being a Latino. So how come when they see a hard working Mexican building a house or cleaning a huge mansion they just look at the downside and criticize by looks?

We also found that in students' writing and self-assessments that many described or discussed visual imagery, music and popular culture. Delcia reflected on her vision of "... a community that has been in silent war for decades; pictures of people working hard for the lowest minimum wage or people being deported or people living in fear." Students also referenced other modalities such as listening to music to "set the mood," or proclaimed that their identity was music. Yet, while Essay 1 drew from students FoK and allowed them to move away from a traditional five-paragraph genre, it was neither produced with new media tools, multimodal or collaborative.

To better engage NL&ML in the FoK approach, Essay 2, "The Community Essay" was designed to engage students in collaborative writing, the use of a wiki and research on the FoK of their communities. An important aspect of Essay 2 is that Ms Smith and I conceptualized the aims of the assignment and use of a collaborative wiki through our observations of the collaborative practices of the Storywiki students. To begin the assignment, we invited the Storywiki students to introduce their work and present how they collaborated to create their narrative. They explained their process as "compromise" and shared how they discussed options until "we find a new idea we can all agree on." They showed the class how they used Internet slang such as "Big smileys to kind of ease the tension," while arguing their position in page comments or with the use of different colored text to represent different authors. The presentation assuaged the worries of their classmates, who expressed they were unsure of how to negotiate different opinions, write collaboratively or use a wiki.

For the classroom version of Storywiki's model, students were organized into research groups that each used their own wiki. Together, they developed a central interview question and three sub-questions related to identity. Each group member also asked three related questions based upon their own area of interest. Table 3 shows (1) the questions that Angelica's and Yolanda's groups chose to address, (2) types of people they interviewed and (3) the new media tools used to conduct interviews with members of their networks.

The students posted the transcripts of the interviews they conducted on their wiki space. They utilized the features of the wiki, conventions for collaboration learned from Storywiki, and methods shared by Ms Smith and myself to first code and analyze their data together, and then to compose their research essay. While students moved forward in drawing from their FoK and engaging NL&ML to generate the content of their work, Essay 2 was still a text-based enterprise.

Phase 3: students as designers of multimodal texts

Essay 3 became a space for the students and Ms Smith to take risks with their comfort level in communicating and interacting with others through new media. Ms Smith, who earlier in the semester had shared that the use of the digital spaces challenged her because she was still more comfortable holding a piece of printed text in her hands, decided to craft the final essay assignment as a visual argument response to another visual argument. The assignment also required students to write two précis: one to analyze the visual argument they were responding to and another for the one they created. Students could choose whatever visual format they desired as the optimal medium for communicating their message. This essay engaged the theme of identity and the ethnographic process by asking students to analyze a social issue related to their identity.

For Essay 3, Angelica and Yolanda chose to create videos. Both students grappled with issues in Essay 3, in a satire and a documentary exposé video respectively, that were closely

Table 3. Essay 2 research questions, interviewees and new media tools.

The graduates	Research question: How does who we are affect our decisions for the future? The state of the state
The metrostudents	 Interviewees: Peers, teachers at Beauty School, cousins New media: Instant messaging, email, uncle's computer, mobile phones Research question: Being of Hispanic heritage, how does a country
	shape your identity? Why? 2. Interviewees: Older female relatives, peers, cousins 3. New media: MySpace, instant messaging, mobile phones, iPod Touch

linked to their position as Latinas in the borderlands region. The following section charts these two students' trajectories over the course of the semester. Their development of learner-generated designs over time shows how they drew upon their FoK as experiences and practices related to daily struggles, their new media practices, and semiotic resources that indexed their lived experience and the knowledge of their networks.

Angelica's trajectory: "learning what we want"

The title of this section characterizes much of the meaning-making process that Angelica, a first-generation immigrant and Mexican-descent student, engaged in within the writing course. For Essays 1 through 3, Angelica drew from her FoK primarily as her own and her community's experiences with stereotypes and her new media practices. While she drew from her own experience, an important aspect of Angelica's work in designing her texts was how she navigated the development of learner-generated designs for audiences beyond her immediate community. In her self-assessment for Essay 1, Angelica wrote: "The difficult part was seeing who my audience would be and how i was going to word it so it could represent me but at the same time proper so anyone can understand it." Angelica's dilemma demonstrates what Hodge and Kress (1988) discuss as the process of mediating between the author's own agency in design and their esthetics, with the conventions of a particular audience.

Negotiating audience in design: FoK as new media practices and language play

Figure 4 documents an issue with audience Angelica had when she drew from her FoK as her new media practices and the playful orthography that she used to stylize images she created online and used for social media communication. As seen in column one of Figure 4, Angelica posted photos on the CSN she had originally edited on the photosharing site Piknic. The images were primarily of herself and her friends and were overlaid or tagged with her special way of writing. Her orthography contained symbols such as hearts and the use of multiple consonants and vowels to emphasize sounds as well as create a novel look to her words. In a final interview, Angelica related how she enjoyed writing in this way, and that she, as well as her younger cousins, also created symbols for use in their instant messaging practice.

Angelica was one of the most prolific posters of media on the CSN. But when she tried to recontextualize her personal orthography as part of the navigation system on her collaborative wiki for Essay 2 and her final portfolio (Figure 4, column 2), she ran into resistance from Ms Smith. She was upset because she felt that limiting her way of writing was against the presentation of the course as supporting learner-centered work. After I discussed with her that she might have to help her audience understand a new convention, she instructed her audience on how to navigate her learner-generated design (Figure 4, column 3). Angelica's experiences highlight how drawing upon FoK and new media for learner-generated designs in academic spaces must negotiate the role of the audience, and cannot simply replicate a practice from out-of-school spaces in a new context. This example also underscores the kind of conversation the instructor may need to have with students as they move their out-of-school practices into new spaces.

Negotiating audience in design: FoK as "learning in daily struggles" (Moll et al., 2013)

In Essays 1 through 3, Angelica's use of her FoK, enmeshed in her social networks and representative of her own and her community's experiences of and responses to the

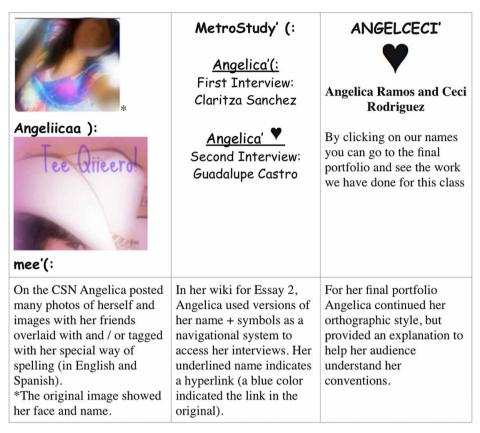


Figure 4. Angelica's recontextualization and negotiation of her playful orthography across digital space and classroom essays.

struggles of everyday life, was also shaped by a concern with audience. Across Angelica's essays, her focus, as stated in her essays and self-assessments, was to show her peers and others what it was really like to be a Mexican-descent student in the Arizona borderlands. Her research group for Essay 2, the community essay, called themselves "the metrostudents," a name that indexed a Spanish language dominant social network site they used. Collectively, the students shared they felt that they were often misunderstood or misrepresented by others in their new country and they wanted to show people who they really were.

In Essay 2, students made visible their own, their peers and other community members' FoK through interviewing those in their networks. They then used their data to write a research essay. Angelica's group focused on the struggles of Mexican-descent youth and adults to maintain their identities within a new land. Figure 5 shows one of Angelica's interview field notes and the transcript posted on the group's wiki page for the purposes of collective analysis. Angelica's interview was with an older woman in her community.

In her notes, Angelica related that the interview was completed in Spanglish. She recorded the answers as well as her subjective sense of the interviewees' responses. The main question the group addressed was, "Being of Hispanic heritage, how does a country shape my identity? Why?" Angelica showed how she was developing her ethnographic sensibilities through her work as an interviewer with her annotation of her

Wiki Pages & Files Search this workspace Angelica'

Angelica'(:

First Interview: Maria Sandoval

Group Questions:

- 1. Do you think that living in (removed name of town) has changed your customs and traditions?
- 2. What traditions do you and your family follow that is commonly celebrated in "Hispanic" families?
- 3. Do you feel like you fit in to where your family comes from?
- 4. What is your heritage?

Own Questions:

- 1. If you were not "Hispanic" how do you think that living in the US had effected you?
- 2. How do you identify yourself?
- 3. Is there any reason that maybe living here hasn't changed your culture?
- 1:23pm, School Hall, March 16th, 2010.
- *Quiet, peaceful, not distracted, relax, calm.

Group Questions:

A1: Yes, a 180 degree turn because i was raised crazy, everything being close, being everywhere. Here (*name of town removed) its far and quiet.

A2: Cumpleaños, Carne Asadas, weekends, Weddings, Navidades, año nuevos. (The interview was spanglish); (When I asked this question I notice that she didn't mention different traditions that are only celebrated in Mexico.)

A3: No, i feel left behind, going places that I've never visited, I feel like a stranger with in my family. If you had the change to go back would you?

A: NO! (I believe that because of the preview answer she had she answer this question this way.)

A4: I'm mexican but my nana nana (Great Grandmother) is from Spain, so I have that in my blood.

My own Questions:

A1. The same because even changing from state to state customs change. "My Corazon Esta Quebrado" When you use to something moving things change. Climate, people you meet, the way you dress, Food, the way you talk.

A2:Quiet sometimes loca, not mature but able to understand reality a beginning mom. Poquito inteligente with blonde moments.

A3: The union between my family the love I have for my moms cooking the way we "me and my sister" connect and my corajes haven't change. (When she answer this question, it was hard for her to answer and she had to give a lot of thought to it.) *How you think immigrating makes you move forward and being where you were brings you back. (Here she answered the main question of our study.)

Summary: Claritza seemed calm, her answers were direct and to the point. She knows there has been changes in her life but from the interview i can infer that she is not sure what those specific changes in her customs are yet.

Figure 5. Angelica's interview transcript and field notes posted on her group's shared research wiki.

interviewees' statement: "here you think immigrating make you move forward and being where you were brings you back," with the comment "(Here she answered the main question of our study)."

On their wiki, Angelica and her group-mates shared and analyzed their interviews according to codes they co-created. The excerpt below shows how the code of age was used to support their argument in the final research essay:

In our research, age played one of the most important factors. Our questions mainly were around teens and the affect that a country can have on the identity of a person. The more that we looked at the interviews of all the members of the group, the more we came to the conclusion that a teen lets the country and the new traditions affect them ...

The excerpt above is also an example of how the students presented a discussion of both the diversity and regularity of their experience as Hispanics (Gutierrez & Rogoff, 2003).

The metrostudents shared in their self-assessments that they became closer friends through the process of writing their essay. Collectively, they shared "(this was) more

than just a class assignment; this was an eye opener for us that Being of Hispanic heritage a country CAN change your identity." With their work for Essay 2, the students developed their ethnographic practices, deepened their relationships among themselves and their networks, and utilized their communities' FoK as valuable academic knowledge for constructing their research essay.

Essay 3, the visual argument essay, provided a space for Angelica to engage in transductive work to further explore her FoK, derived from her experience as a Latina student in America. Again, Angelica had to negotiate how to present her experience to an unfamiliar audience. She partnered with her classmate Rosi, another first-generation Latina immigrant for the visual essay. Their work emerged from their analysis of an antiracism video on YouTube and our in-class discussion. The video they analyzed was meant to counter racist videos that sometimes appeared on YouTube and depicted events such as "wetback" or "blackface" parties at universities. Yet, they expressed in their précis that despite the video's antiracism message, it shared what they viewed as very offensive images of Whites stereotyping Latinos. They wrote, "the one thing that made us see the racism the most throughout the video was the shirts of the students in the pictures. The shirts said, SPIC N SPANISH GARDENING." The two young Latinas were interested in depicting their own version of the video that would include parallel images of Whites, but they were reluctant to potentially offend others. We discussed the power of parody and humor to diffuse charged imagery, as well as the difficulty in re-interpreting images that create a visceral reaction.

Angelica and Rosi chose to create a parody and social commentary video entitled "Blonde Moments," a term they used colloquially among themselves to indicate they had times where they were not "with it." The video explored what Angelica discussed as the privilege to act unintelligent and still succeed, a luxury, the students felt as Latinas, they did not have. In the video, the students juxtaposed heiresses "playing dumb" with students who put on blackface at fraternity parties, all to the tune of a Paris Hilton song. While this media was shown, they explained in a voiceover, their empathy that we all have "blond moments" and that their overall message was that success does not depend on a person's race. At the end of the video, they shared a long list of intelligent "blondes" they admired, such as Sandra Day O'Connor and Hilary Clinton.

Angelica and Rosi shared in their précis that that they used humor to address their subject and voice their opinion about harmful stereotypes. Their juxtaposition of images of silly blondes with highly respected blondes mediated between their experience and aims as Latinas with the conventions of what it means to be a "blond" in different US contexts. The video format created a space for them to produce their own learner-generated design to represent their experience, situated in their FoK and communicated in sound, images and language. They shared their video in class and also posted it on YouTube. Yolanda, whose trajectory I present next, also created a video to address an important personal issue, this time a moral dilemma connected to her position as an immigrant student in the borderlands.

Yolanda: "what goes on at the academy of beauty"

Yolanda was a second-generation immigrant student of Mexican-descent. For some students such as Yolanda, who had rarely attended our early AM class, their academic trajectories within the writing class did not really begin until the community essay made the classroom space more relevant to their lives. Like Angelica, the FoK Yolanda drew from to generate her essays emphasized the FoK she developed through coping with her experiences as a second-generation immigrant. For most of the semester, she was absent at

least twice a week, and she often looked exhausted in the 8-AM class when she was present. Yolanda's absences and lack of work began to feed into a growing alienation and even hostility between her and Ms Smith. A brief interview revealed that her lack of class involvement was largely because she attended beauty school far from home late into the night. She shared she did not want to struggle like many of her friends and family, and to this end was ensuring she would have a job directly after high school, though she was saddened she had traded in her once good grades for this aim. Later, we also learned that Yolanda lived with her older sister because her parents, who were not US citizens, were living in Mexico.

Yolanda was concerned, like her peers in the group the Graduates, with "life after high school." Together, they posed the question of how their identities affected their decisions for the future. After learning more about her struggles, the author encouraged Yolanda, for Essay 2, to interview people in her future field and at her beauty school about issues of personal interest, such as the importance of building relationships in their line of work. Yolanda shared in her research group's brainstorm on their wiki, that "It made me feel really good reading all the interviews ... it seems to me that we all want a better future." She saw a shared goal of achievement across their 11 interviewees, who were primarily Mexicandescent peers, relatives and teachers at her beauty school.

After Essay 2, Yolanda confronted a personal issue related to her future goals for Essay 3. For her visual argument, Yolanda wrote and produced a documentary video. She confronted similar issues to Angelica regarding how to represent her experience to an unfamiliar audience. In the video, she narrated her discovery of the dishonest practices of the beauty school she attended late into the night, and her struggle to come to terms with her own actions, when she began to cheat what she knew was an unfair system. Yolanda had a smart phone but no internet access or computer outside of school; so she came to Ms Smith's classroom to type her script and edit her video with Windows MovieMaker. With our support, she stepped back and reflected on how to present the "hours" she talked about with great passion in the retelling of her story. Her discussion of her "hours" did not resonate with us, or her peers, when she had initially shared her story through spoken and written text. Subsequently, she made new design choices for her video in order to better communicate her message.

The video Yolanda created, entitled "What Goes on at the Academy of Beauty", was not technically complicated. However, the video demonstrated a coherency between the images and the words she spoke that explained and reinforced her argument. She used symbols such as the repeated appearance of clocks and her beauty school time sheets to represent the contradictory ways she and the Academy of Beauty constructed and experienced her "hours." Showing a map of the city, Yolanda explained in the video how she had to drive 45 minutes every night after school in order to acquire the 1600 hours she would need to graduate from beauty school by the time she finished high school that June. Yolanda stated in the video that she was "sacrificing herself" because she had been an "A" student before she entered beauty school. Her narrative embodied her experience and struggles by sharing her FoK as visual semiotic resources that supported her claims and were used to reflect on her own and other's actions.

Yolanda was excited to share her story with the class and to relate the news that she met with district personnel and that they stated they would look into the issue. Working on her script and video had helped her to create an argument to share with the district administrators that was important for clearly communicating her message to the outside word, as well as for making decisions about and reflecting upon her own actions. Importantly, through this work, Yolanda demonstrated how she could make choices about how to best communicate her story to an audience. She translated her initial script into a visual format and

recontexualized semiotic resources from her everyday life, such as her time sheets, for dramatic effect.

Subsequently, at the end of the year after a conversation with Ms Smith, with whom she had developed a warm relationship, she re-wrote her identity essay (Essay 1). Her topic became a discussion of addressing a fear of imperfection in her writing that was holding her back from trying. She hypothesized that the distance between herself and her parents in Mexico heightened her inability to stick to one path. With her rewritten essay, Yolanda utilized her FoK, developed through her experience of school and life as a young immigrant. She shared in the culminating interview that perhaps in the future she would move on from being a stylist and look into a medical career. With these comments, consider that Yolanda's use and extension of her FoK in class, to design both the format and content of her essays, might also influence her ability to design her own learning futures.

Conceptualizing learner-generated designs through an FoK approach to the appropriation of digital media

FoK across Angelica's and Yolanda's work

Table 4 outlines the FoK Angelica and Yolanda drew from to develop their essays. As discussed by Moll et al. (2013), for students such as Yolanda and Angelica, the very strategies developed for survival outside of school are an important form of FoK that might be leveraged for other purposes in the classroom. As researchers of their experience, they looked inward at themselves and outward, toward their social networks and their peers, to make visible and mobile their own and their communities' knowledge and practices. These FoK were then taken up as semiotic resources for the design of their essays. In addition, as part of their FoK and as a way to engage their experience for learner-generated designs, Angelica and Yolanda drew from their digital media practices and developed new facility with new media tools. Their essays utilized their FoK situated in their experience as Latino youth to address issues of personal concern. Yet, their work also dealt with themes of hypocrisy and human nature relevant to broad audiences. In their learning process, it was the joint negotiation of interests, spaces, platforms and processes across multiple actors that afforded the potential for learner-generated designs that had meaning and were consequential for multiple authors and audiences.

FoK in the design of curricular spaces

FoK research seeks to generate relationships of reciprocity and trust so that students' lived experiences and histories, their own and those of their communities are viewed as and

Table 4. FoK across Yolanda's and Angelica's essays.

• Experience of daily struggles; as a Latina in the bordlerands
 Digital media practices and language play
 Experiences of women in her community; peers
 Experience of daily struggles; as a Latina in the
borderlands
 Visual semiotic resources representing her beauty school
 Experiences of teachers at her beauty school; peers

utilized as valuable resources for learning in academic spaces. While a FoK approach involves ethnographic observations, the task is not to simply learn about students' FoK and then move practices and interests from one space to another without changing the organization of the academic context. We did not expect any one actor in the process to be able to create on their own a way to support learner-generated designs. Rather, it was the negotiation of collaborative processes among participants that afforded new possibilities for learners to shape the format and content of their compositions.

In our FoK approach, distributing agency to students with the assistance of new media helped us to develop relationships that supported students' and teachers' risk-taking in the design of new curricular spaces and learner-generated designs. Ethnographic methods were an essential component of building relationships of trust and for informing the design process. Using new media to gain a window to students' practices supported our work as instructors through the development of a deeper understanding of the students as people with rich and complex lives beyond the bounded time and space of the classroom (see also Schwartz, Nogueron-Liu, & González, 2014). New media also supported the students in the development of their own ethnographic and analytical practice.

Angelica and Yolanda utilized their FoK, such as Angelica's inventive spelling and Yolanda's "hours," and their experiences as Latina immigrants. But in order to appropriate their FoK for academic purposes, they needed the support of Ms Smith and myself for negotiating ways of communicating their experience to unfamiliar audiences. Likewise, Ms Smith and I needed to learn about the ways in which the students utilized digital media in their out-of-school lives and their concerns and interests in order to redesign the classroom essays as frameworks for students' learner-generated designs.

Shared responsibility for the format and content of the course's essays helped us to mobilize the movement of FoK across contexts and expand available semiotic resources for meaning-making in the classroom. As seen in the examples of Yolanda and Angelica, connecting school and their present reality supported these students in viewing their experiences and networks in new ways and as resources for academic learning. With the assistance of the tools and pedagogies implemented in the course, the students came to new understandings about their FoK, the use of digital platforms and classroom spaces, and the possibilities for self-expression through writing as a multidiscursive and multimodal social practice.

Reflecting on the work of Ms Smith's class supports a concept of learner-generated design as a social process realized through pedagogies and tools that aim to examine, circulate, value and appropriate students' FoK. Through drawing upon multiple modalities, eschewing the standard classroom format of the five-paragraph essay, and drawing from a diverse array of FoK, students were supported in creating representational spaces (Lefebvre, 1991) that reflected their FoK and new ways of knowing and doing. By allowing for reciprocity between social worlds, learner-generated designs were developed that reflected literacy as a process that crosses multiple discursive domains and expands beyond the bounded and linear progressions of normative academic development. Implementing the use of new media in the classroom in a manner that drew from the social uses of new media in students' lives, as well as possibilities for extending students' practices and futures, supported participants in taking up students' FoK for expanding the "available designs" for learning (Cope & Kalantzis, 2009) in the classroom.

Importantly, in our work with students, we were not focused on the presentation of perfect grammar. Rather, fomenting learner-generated designs as a component of literacy learning was viewed as a process of expanding available semiotic resources for meaning-making in classrooms and supporting students' multidiscursive capacities toward the

development of personally, academically and socially responsive texts. Looking forward, practitioners serving students from nondominant communities who are wary of implementing digital tools in resource-poor environments might also view the development of learner-generated designs as a form of "inventos," a concept I borrow from Jacobs-Fantauzzi (2003). Learner-generated designs as a form of *inventos* would attune practitioners and students alike to the creative possibilities of digital media in academic contexts where material resources might be scarce, but the FoK and new media practices of students decidedly are not.

Disclosure statement

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Notes

- Pseudonyms are used for all participants' names, the names of digital spaces, and in images and representations of students' work that appear in this article.
- 2. For simplicity, I use the term new media broadly to refer to technology tools such as mobile phones, virtual spaces such as social network sites and digitally mediated practices such as texting and viewing, posting and creating media. The conflation of tool, space and practice also underscores the ways in which context and activity are interconnected.
- For an extended discussion of identity in this work, see Schwartz (2014) and Schwartz et al. (2014).

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