The Pedagogical Moves of Artist Mentors in a Library Makerspace

Tesha Sengupta-Irving, University of California, Berkeley, tsi@berkeley.edu
Lauren Vogelstein, Vanderbilt University, lauren.e.vogelstein@vanderbilt.edu
Corey Brady, Vanderbilt University, corey.brady@vanderbilt.edu
Emily Phillips-Galloway, Vanderbilt University, emily.phillips.galloway@vanderbilt.edu

Abstract: The United States has seen a dramatic rise in public library makerspaces (PLMs). As maker education wrangles the logics of making as market-oriented career preparation and desire-based creativity, we explore how artist mentors (n=12) work with youth in a large metropolitan PLM. Drawing on interviews and observations, we find artist mentors reconciling the economic and creative logics of making through pedagogical moves that exalt teen voice, and conjure imagined futures in-the-now (prolepsis). We argue these outcomes are not happenstance: Harmonizing the economic and creative impulses of making mirrors the professional histories of artist mentors themselves, and PLMs as public institutions of influence. We conclude by discussing the future of maker pedagogies and PLMs as consequential sites of teaching and learning, within the broader sociopolitical project maker education.

Introduction

Broadly defined, makerspaces are settings where people participate in the creative production of artifacts (physical, digital) through activities like crafting, entrepreneurship, and engineering (Halverson & Sheridan, 2014). As makerspaces proliferate (Lee & Phillips, 2018), so too have calls for equity-oriented approaches to making as contrasted against those that exclusively promote individual entrepreneurship and wealth-generation (Lakind, 2017; Vossoughi, Hooper, & Escudé, 2016). Answering such calls will, among other things, take considerable thought about the value system communicated to youth about the purposes of making and its meaning to them now and in the future. The pedagogical work of makerspace mentors, we contend, serves as the frontline of this effort.

This study takes place in a PLM ("Main") designed for teenagers (12-18 years), a majority of who are racially minoritized. Drawing on interviews and observations with artist mentors (n=12), we describe three specific pedagogical moves working artist mentors used to support youth and that also seemed to reconcile the economic and creative purposes for making. We argue this is not happenstance –working artist mentors embody the harmonizing of economic and creative impulses, and propagate that disposition through their pedagogical moves. We thus propose that PLMs (and the artist mentors working therein) are critical to the future of maker education because they are a unique public crucible in which multiple logics for making can be mixed and forged anew.

Background

The Maker Movement has been described as one that promotes innovation, production, and entrepreneurship in people's daily lives by transforming hobbies into income-generating endeavors. These profit motives of making imbue human creativity and artistry with neoliberal ideology, as reflected by the "global marketplace" of handcrafted arts (e.g., Etsy) or subscription-based publications on making (Lakind, 2017). School-based makerspaces similarly reflect neoliberal logics, where maker learning is treated as yet another path to STEM workforce readiness (a form of corporate interest). And yet, neoliberal logics do not fully define the purpose of making historically or presently (e.g., Clapp et al., 2016; Greenberg & Calabrese Barton, 2016). In particular, PLMs are an opportunity to debate the values, practices, and futures of maker education in an institution long known for debating the public good (Buschman, 2005) and democratizing access to information and learning for all (Lee & Phillips, 2018).

When mentors embrace diverse forms and purposes for making, their pedagogical work aligns with research on teaching that argues the importance of incorporating epistemic heterogeneity and variability in cultural forms of disciplinary learning (Gutiérrez, 2017; Turkle & Papert, 1991). In makerspaces, diversifying the cultural forms of making has come with increased integration of technology, visual arts, and crafting (e.g., Peppler, 2013). Blending arts education, PLMs are advancing individual interest, creative expression, and imagination through artistic production. Consequently, involving artist mentors, for whom the maker movement is not novel, represents a fresh and important opportunity for adults to "to join forces on projects and education with [youth] who may never have considered themselves artists, or with tools of artistry rarely used" (Barniskis, 2014, p. 10).

Methods

Setting and participants

Main, located in a large metropolitan city, was a PLM that provided teens with a host of tools (e.g., 3D printers, vinyl cutters, audio and visual editing equipment) and activities. Teens came during drop-in hours or 5-10 day themed camps (e.g., Cardboard CosPlay, Music Video Production). Main's music production program was primarily facilitated by City Sings, a local activist organization that mentors teens in spoken word poetry and music. The participants in this study were 11 artist mentors and the Director of Main. The working artist mentors, who were predominantly white, came from a variety of art and technology backgrounds – music production (synthetic), music (acoustic), sculpture, graphic design and screen printing, textile arts, printmaking, and robotics/electronics.

Data collection

The analysis draws on semi-structured interviews with the mentors and six weeks of observation (86 hours). Using a common semi-structured interview protocol, each mentor was interviewed by a member of the research team. Additionally, the majority of mentors (n=10 of 12) were observed working with youth. Typically, one or two research team members conducted observations on a given day. When two were present, they divvied up the space and activities while allowing for natural overlap. Fieldnotes captured talk, interactions, and activities of mentors working with teens. Observer comments and asides were italicized and bracketed from the descriptive text (Emerson, Fretz, & Shaw, 2011). All fieldnotes were typed up as formal research protocols (Hatch, 2002) before returning to site.

Data analysis

The data analysis unfolded in three waves: (1) iterative development of codes for mentor interviews; (2) iterative development of separate but related codes for mentor-teen interactions in fieldnotes; and (3) development of "crystallizing stories," a reference to both *crystallization* as a technique of qualitative research (Ellingson, 2009) and the emerging narrative coherence (or *story*) between mentors' perspectives (interviews) and pedagogical moves (observations). A summary of the analytic efforts over these waves is presented in Table 1.

Table 1: Summary of coordinating interview and fieldnote coding with resulting crystallized stories

Codes from Interviews	Description	Parent and Child Codes from Fieldnotes	Crystallized Story
Making | Mentor Bio	Talk or activity that invokes their backgrounds as artists in mentoring	Working Artist Mentor | Skills Development | Certification | Career	*Working Artists*
Mentoring-micro	The foregrounding of teen voice or agency in mentoring	Invitations In | Keeping in Flow | Flux Population | Voice, Choice, Interest	*Voice*
Mentoring-career Mentoring-micro Mentoring-social dimension Making-social dimension	Use of proleptic talk or actions that imagines teen futures as in-the-now	Self Imagined or Real | Career | Voice, Choice, Interest | Art in Life	*Prolepsis*

First, the first and second author collaboratively chunked transcripts into topically related turns of talk where a change in topic, focus, or emphasis delineated one from another (Miles, Huberman, & Saldaña, 2013). Through iterative cycles of defining, applying, comparing, and refining codes on a sub-set five of interviews, we agreed on parent and child codes to capture, for example, granularity in participants' reflections on mentoring (e.g., *micro, macro*), variability in definitions of making (e.g., *technology*, *art*); and invocations of race, class, or gender (*social dimension*). Second, we focused on fieldnotes, with particular attention to mentor-teen interactions. The depth and diversity of events captured in fieldnotes warranted a new, but related codebook. We began by open coding five of the 22 days of fieldnotes, which provided broad brushstrokes of mentors' practices. Through multiple iterations of defining, applying, comparing, and refining codes from there, we settled on fifteen codes (parent and child), which were then applied to all fieldnotes. Third and finally, analytic memos interpreting the content of

similarly coded excerpts of transcript, and events in fieldnotes, led to three crystallized stories that made visible the significance of artists as mentors and the specific pedagogical moves they used to support teens at Main.

Analysis

The Director of Main, an artist himself, favored hiring artist mentors with a diversity of interests in technology and visual and performing arts. The mentors saw two primary ways in which their professional histories were important. First, they all valued learning environments where creativity flourishes: "We are so passionate about learning and we all love creativity. Most of us, we went to college for something creative and we got to learn and thrive in environments where you're surrounded by peer mentors, teacher mentors, etcetera" (Leena). Second, there was a sense that modeling a professional passion for the arts enlivened youths' learning. As Thomas, a sculptor and organizer of CosPlay Camp explained, artistic passion was "even more important than having a natural interest in working with teens," because rapport could be forged through shared artistic curiosities and impulses regardless of teen or mentor backgrounds. Noah, the acoustic music mentor, elaborated further explaining that he could get *any* teen to "stick around" by just inviting them to "rock out" with him. Noah's "rock out" example signaled mentors' sense that their artistic passions were generative in inviting teens to engage in, and learn to love, making.

Three specific pedagogical moves

The first pedagogical move was what we called, *exalting teen voice*, which represented mentors understanding when too much support could foreclose on creative struggle and teens' artistic impulses, but too little risked teens disengaging. Mason, a music production mentor explained it as "no backseat driving" where: "It's better to give [teens] gentle nudges and see what they come up with themselves". In Music Production Camp, for example, Mason was working with a teen and suggested he change the music laid on the beats. When the teen hesitated, Mason "*immediately responds by helping [the teen] do it the way [the teen] wants it done*" (Field Note, 6/26/17). In that moment, Mason stopped "driving", ratified the teen's artistic instinct, and followed it. Similarly, during CosPlay camp Thomas acknowledged to teens how finding one's artistic voice was challenging: *"Thomas passes by Penny, who is holding up her creation. He asks if she needs anything. She says she can't decide what to do next. Rather than stay, he says, 'That's the hard part,' and moves on*" (Field Note, 7/26/17). Thus, with a light pedagogical touch, Thomas normalized Penny's uncertainty, empathized with how it felt, but also restrained himself from eclipsing her voice and process.

The second pedagogical move was *prolepsis* – representing something as existing before it does. Repeatedly, we saw mentors acting ways that treated teens' aspirations as already real (sometimes even suggesting possibilities the teen hadn't yet voiced). Jacob explained this proleptic view as a pedagogy that focuses "on who the child is trying to become and then from there, focus on who they are." For mentors like Octavio and Caroline, prolepsis also meant treating nascent interests as a sign that fluency was within reach. For example, when teens would play acoustic instruments – even when just messing around – they would suggest teens return on Friday to jam with Noah. Such moments recast uncoordinated, spontaneous, or nascent activity as worth being taken seriously; as moments to see teens as already artists in the making. Importantly, mentors only engaged in proleptic talk for as long as the teen sustained interest in the activity and approved of such musings. Moreover, when teens asserted their proleptic selves, mentors never contested; to the contrary, they regularly affirmed. For example, when a teen banged loudly on the drums and screamed, "I am a rock star!," Noah responded, "Yeah you are!" from across the room. Prolepsis was thus a pedagogical move that positioned teens and their artistic endeavors as meriting the respect afforded to future professional artists by adult artist mentors in their midst.

The third pedagogical move involved mentors pairing proleptic talk with industry preparation that mentors regularly enacted. This meant, for example, highlighting the pragmatic dimensions of actualizing one's dreams (e.g., time, effort, practice) or amplifying the heterogeneity of what people do as artists in a given field. Caroline, for example, repeatedly highlighted the heterogeneity of what industry people do during her Video Production Camp. As fieldnotes illustrate, Caroline explained to teens that becoming a focus follow was a viable and desirable future in video production: she explained how much the focus follow makes, their professional rank, the nature of their work *in situ,* and how it blended the "passions" (not skills) of math and photography. Such exchanges occurred within a flow of activities that Caroline designed to expose teens to multiple ways of working in the music industry. Pairing such proleptic talk with preparation and concrete details thus reflected a pedagogically sophisticated move balancing possibility with reality: mentors were at once affirming the artistic dreams of teens and also asserting their professional knowledge of what it takes to achieve those dreams.

In sum, as part of a broader sociopolitical project of democratizing and diversifying making, playing close attention to the disposition of mentors toward their work, and to the pedagogical moves they employ, is well warranted. The dispositions toward artistry and making, and the specific pedagogical moves described herein

represent ways that mentors at Main worked to diversify making as more centrally about creative artistic expression, and to democratize making by consistently asserting it is achievable by all. Whether introducing teens to the heterogeneity of professional artistry or supporting their agency in calling forth imagined futures, these pedagogical moves safeguarded new possibilities for teens in making.

Conclusion

This analysis began by recognizing that PLMs are a contemporary theater for reconciling making as individual wealth generation with making as expressing creativity, interest, or social desires. Further, that makerspace mentors are on the frontlines of that effort; their pedagogical moves message the value system, purposes, and meanings of making to minoritized youth now and in the future. In his final book, Dr. Martin Luther King, Jr. (1967) called for a revolution of values that would shift the United States from a "thing"-oriented to "person"-oriented society. He argued, "When machines and computers, profit motives and property rights are considered more important than people, the giant triplets of racism, materialism, and militarism are incapable of being conquered" (p. x). In the context of The Maker Movement, this argues for an expansion of making from simply "thing"-oriented, wealth-generating, corporatized activity of individuals to include a "person"-oriented, voice-exalting, proleptic experience of self-determined creativity in community with others. Such an expansion of possibilities would also mean that those who mentor them look not just outward at a future horizon of possibility, however distant or near, but also inward at their interactions with youth that make real whatever expansiveness or constraint lies ahead.

References

Barniskis, S. C. (2014). Makerspaces and teaching artists. *Teaching Artist Journal*, *12*(1), 6-14.

Buschman, J. (2005). On libraries and the public sphere. *Library philosophy and practice*, *7*(2), 1-8.

Clapp, E. P., Ross, J., Ryan, J. O., & Tishman, S. (2016). *Maker-centered learning: Empowering young people to shape their worlds*. John Wiley & Sons.

Ellingson, L. L. (2009). *Engaging crystallization in qualitative research: An introduction*. Sage.

Emerson, R. M., Fretz, R. I., & Shaw, L. L. (2011). *Writing ethnographic fieldnotes*. University of Chicago Press.

Greenberg, D., & Barton, A. C. (2017). "For girls to feel safe": Community engineering for sexual assault prevention. *Girlhood Studies*, *10*(2), 8-25.

Gutiérrez, R. (2017). Living mathematx: Towards a vision for the future. *Philosophy of Mathematics Education*, *32*(1).

Halverson, E. R., & Sheridan, K. (2014). The maker movement in education. *Harvard Educational Review*, *84*(4), 495-504.

Hatch, J. A. (2002). *Doing qualitative research in education settings*. Suny Press.

Lakind, A. (2017). Public libraries as sites of collision for arts education, the Maker Movement, and neoliberal agendas in education. *Journal for Learning through the Arts*, *13*(1), n1.

Lee, V. R., & Phillips, A. L. (Eds.). (2018). *Reconceptualizing Libraries: Perspectives from the Information and Learning Sciences*. Routledge.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2013). *Qualitative data analysis*. Sage.

Peppler, K. (2013). STEAM-powered computing education: Using e-textiles to integrate the arts and STEM. *Computer*, 1.

Turkle S., & Papert, S. (1991). *Epistemological pluralism: Styles and voices within the computer culture in In I. Harel & S. Papert (Eds.) Constructionism. Norwood, N.J. Ablex Publishing Corp.*

Vossoughi, S., Hooper, P. K., & Escudé, M. (2016). Making through the lens of culture and power: Toward transformative visions for educational equity. *Harvard Educational Review*, *86*(2), 206-232.