REENVISIONING PRESERVICE TEACHER IDENTITY: MATRIXING METHODOLOGY

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INTRODUCTION TO SPACETIME METHODOLOGY

As we try to reenvision or reimagine something in teacher education that has yet to come fully into existence, reconsidering methodological approaches that authenticate this kind of research presents new challenges. As new methodologies emerge, we are challenged to imagine new ways of reconceptualizing and reconsidering findings and their efficacy in other fields. Specifically, in the visual and communicative arts are often nonbinary and spacetime theory enables us to reconceptualize how to make meaning of findings. This research directs us toward newangled reconceptions of preservice teacher identity as illuminated by an imaginative methodology viewed through a spacetime lens.

Specifically, this research turns us toward the intersections of preservice English teacher identity and thirdspace as a methodology that is rooted and framed by illuminating the matrix that is coconstructing a preservice teacher identity during any space and time. This "methodological turn" is illuminated by drawing from research that enters into a new space of nonbinary making meaning of preservice teacher identity through visual and communicative spatialities by reconceptualizing research devoid of spatial conceptualization. I reflect on the vulnerabilities of preservice teachers' identities, as they are coconstructed and co-reconstructed by a rapidly changing sociopolitical landscape of networked relationships that is affected by the space and time during which a preservice teaching identity is coming to be. By mining the matrix in which a teacher identity is coming to be, the matrix as methodology helps to illuminate current and future landscapes in which a preservice teacher is coconstructed during any space and time.

Reenvisioning Spacetime in Teacher Education

For teacher preparation to have power and to benefit from current and future democracies, it must stay true to a course in teaching for social change and social justice. Cochran-Smith (2004) responded by suggesting that for teacher education to move toward a social justice agenda it must be conceptualized as both "a learning problem and a political problem" (p. 2). This indicates that we must look outside of the educational axis at how teacher preparation is influenced by other fields and their methodologies, so that we might better understand how to appropriate, by expanding prior research, tools that can best prepare us to meet the demands of competing political agendas. Innovating visual and communicative methodologies prepares us with an efficacy that can have far-reaching implications that attends to a social justice agenda. Cochran-Smith's suggestion is a vital springboard to enacting innovative methodologies.

Terminology

The words landscape and geography will be used interchangeably and used in different contexts and references a large, ethereal, real area.
The landscape contains all of the "actants," or participants (Brandt & Clinton, 2002), and policies that are coexisting as the identity of the teacher during various spaces and times, and its mutability is consistent. Since there is never one particular actant coconstituting the identity of the preservice teacher, the preservice teacher is involved in the correalational dynamic of the very process of being coconstructed both within and by the landscape. Through the preservice teacher's place within the landscape, the teacher is a coparticipant in the process capable of appropriating from, negotiating toward or against, and identifying with others his or her own preservice teacher identity. By asking participants what their teacher identities mean to them, we gain insight into the landscape which contains all of the actants that are participating in their coconstructions. Such a subjective act challenges and disrupts the recurrence of dominant binary paradigms and an often quiet subversive status quo in research methodologies that disables participants' voices, and instead, elevates the voices of the participants to a status of a coauthor thus giving them agency and empowerment within research and possibly society at large. For this research, preservice teachers were not viewed as objects but rather as ontological subjects that could enhance a transdisciplinary conceptualization or that "cuts across all perspectives and modes of thought" (Soja, E. W., 1996, p. 3). A transdisciplinary recontextualization further challenges the notion that the past is spatially and temporally fragmented and can help us reenvision how teacher identities were being coconstructed both spatially and temporally.

The landscape that contains all of the elements that inform and construct preservice identities is bound by a specific space and time, or spacetime (Nespor, 1997, p. 60). By spacetime I reference the spatial (space), a place that "brings specified factors constructing identity" all together and substitutes itself for each factor separating and enveloping it" (Soja, E. W., 1996, p. 45). Space also references the physical layout of the factors (social groups, communities that apprentice a teacher, institutions, media, policy, and research) and the places in which an identity comes to mean. By temporal (time), I reference the literal time in which the identity is being formed. The spacetime relationship is based on the premise that time and space are fluid and, therefore, are constantly changing. Most theorists have written the actual word spacetime by using a hyphen (-), so it appears as space-time; I, however, eliminate the hyphen to show that the terms are correalational. The boundedness of teacher identity by the relationality of spacetime suggests that preservice teacher identity then is fluid and constantly shifting. Consequently, preservice teacher identities are subject to stabilization and destabilization during any spacetime. Stabilize and destabilize are terms appropriated from Leander's (2002) study, Locating Latanya, in which he looked at how a student's identity was stabilized and destabilized by a banner placed in a classroom space and through the use of student and teacher discourse. Stabilization means that a preservice identity is steadied by some factor of the landscape that is coconstructing it, such as a space or a person, while destabilization means that a preservice identity is invalidated or unstrengthened by some element that is coconstructing the teacher, like by a person or changes in policies in a particular space.

This research enters into a new space of making meanings of identity through new spatialities by reconceptualizing spatialized methodologies. It exposes the polemic struggle between binary thinking in Soja's (1996) discussion of firstspace/real actual space/concrete materiality of spatial forms, on things that can be empirically mapped" (p. 10)—and secondspace/imagined space)—"conceived in ideas about space, in thoughtful re-presentations of human spatiality in mental and cognitive forms." (p. 10)—as they intersect with concepts of thinspace—the amalgam of both the "real-and-imagined" journeys or the "thinning" of spatial awareness and imagination (p. 11). Examples of firstspace include, but are not limited to, such physical and real life texts and contexts as a grid, a map, or a rhizome. Examples of secondspace include, but are not limited to, such abstract or imagined concepts through contextual discourses as a discussion of life in outer space, speaking gibberish, or projecting oneself into the future. Both firstspace and secondspace thinking and research narrows and limits our understanding about identity and reinforces a binary recognition of preservice teacher identity because it delimited our lenses to what is readily visible to the researcher. For instance, firstspace and secondspace research might focus on what corporeal events in the classroom or in a school context and may even invite in some thinking about how to create change in the classroom. Thinspace, on the other hand, is the "creation of another mode of thinking about space that draws upon the binary and mental spatial spaces of the traditional dualism but extends beyond them in scope, substance and meaning." (Soja, 1996, p. 11). When we view identity through thinspace, we open up the possibilities that teacher identity is influenced by factors that are both invisible and visible, tangible and intangible, real and unreal, and present and future. It opens up the window to see that preservice teacher identity is vast and that it can be readily understood. Thinspace gives us room to imagine and generate possibility for how we are seen and for how others see us. It allows us to reinvent ourselves. This research encourages and begets a spatial methodology that aligns with nonbinary meaning-making.

This article will be divided into four parts. In part one, I contextualize and make a case for research on preservice teacher identity in the visual arts. I then review spatial and temporal terms that respectively ground the research design. In part two, I review the literature on spacetime theory and reenvision a spacetime theoretical framework for reconceptualizing preservice teacher identity. I also describe how the methodology and data analysis for this research contributes to furthering our conception of the visual arts. In part three, I draw upon one case study (Miller, 2005) to elucidate how methodology illustrates how secondary preservice English teacher identity is geographically "meaning." In the final part, I offer implications for the continued significance about conducting transdisciplinary research through visual, spatial, and imaginative ways and how that can disrupts dominant paradigms that have reinforced hegemony.

REENVISIONING A SPACETIME THEORETICAL FRAMEWORK

In order to understand preservice teacher identity and the significance of burgeoning methodologies in the visual and communicative arts, we must first reconceptualize identity in spacetime. Though there are competing theoretical studies on identity development,
focus on the studies of identity through a poststructural lens of sociocultural theory and anthropological studies (Au, 1998; Heath, 1983; McCarthy & Moje, 2002; Ochs, 1988; Perez, 1998), which have paved the way for concepts of identity through spatiality and hybridity theories (Anzaldúa, 1987; Bhabha, 1994; Hagood, 2002; Hall, 1996; Gutiérrez, Raquelano-López, & Tejeda, 1999; Foucault, 1986; Leander, 2002; Luke, C., & Luke, A., 1999; Miller, 2005; Moje, 2002; Soja, E. W., 1996). Combined, these theories suggest that identities are changing, constantly in flux, stabilizing and destabilizing, as they transact and negotiate through activity and oppressive structures (Bakhtin, 1986; Gee, 1996; Freire & Macedo, 1987; hooks, 1989, 1994; Minh-Ha, 1989, 1991; Solorzano & Villaipando, 1998) with the world around them (through using discourse, identifying with artifacts, or being in different spaces). Identity is something that is constructed through competing forces and that our position in a space is "offered, accepted, rejected, and otherwise continuously negotiated" (Leander & Sheehy, 2004, p. 116) as individuals engage in social spaces. Within these spaces, identities are "produced, negotiated and hybridized within the flow of dialogue" (Leander, 2001, p. 637). Such an understanding of identity through a spacetime lens paves the way to making meaning of preservice teacher identity in spacetime.

Preservice teacher identity construction as a whole has been insufficiently researched. To a large degree, the preservice teacher identity is predetermined because of institutional and social expectations. I approached the literature with a transdisciplinary focus that pushed the boundaries of binary constructions and understandings of preservice teacher identity by relocating and forwarding its placement within various intersections of research fields outside of teacher education. I primarily focused on preservice teacher identity construction from spatiality/hybridity theories, critical literacy, and feminist studies. These fields share dialectical and dialectical perspectives on how identities come to be formed and how identities come to mean through transacting (Rosenthal, 1994) with and within, various social spaces and through marginalization from various social spaces (Leander, 2002; Lefebvre, 1991).

The related research to this guiding topic is limited in its scope of the social construction of preservice teacher identities (Britzman, 1991; Danielewicz, 2001; Vinz, 1996). Research on preservice teacher identity construction in the schooling process is also quite underdeveloped in its breadth and depth of identity analysis (Britzman, 1991; Danielewicz, 2001; Vinz, 1996). Although some studies have been conducted regarding how student identities are constructed (Apple, 2002; Levinson, Foley, Holland, et al., 1996; Hagood, 2002; Leander, 2002; McCarthy & Moje, 2002; McLaren, 1986; Moje, 2002), how teacher identities are constructed (Britzman, 1991; Danielewicz, 2001; Grossman, 1990; Vinz, 1996), and how preservice student teacher identities are constructed (Britzman, 1991; Danielewicz, 2001; Vinz, 1996), these studies tend to be nondondisciplinary in focus. Few studies, if any, have looked at the spatiality and temporality of preservice student teacher identities (Britzman, 1991; Nespor, 1997). Appropriating postmodern concepts, while reviewing the literature on preservice teacher identity construction and viewing the data through both spatialist and feminist lenses, can help us to envision preservice teacher identity altogether.

Postmodernism underscores that identities and ideas are not black and white but, rather, provides a kaleidoscopic lens that allows us to view concepts from a space outside of the object being viewed. Therefore, meaning can be found in relation to, rather than within, an object. For this research then, preservice teachers negotiated their identities and came to make meaning of what their preservice teacher identities meant to them both toward and against others, theories, pedagogies, policies, and the like. Rose (1993), Leander (2002), Moje (2002), and Hagood, (2002) suggested that identities can be shaped in response to oppressive structures and that "identity built on the opening of new spaces" (Soja, 1996, p. 111) relocates us to a place where countergenerative principles can lead to a liberal democracy. When individuals negotiate and contest their identity development by dominant culture, they may develop identities that may be marginalized by social groups that retain power. Rather than negotiating toward identities, these researchers suggest negotiating against identities. Their studies provide a framework for further research in this theoretical field (Bakhtin, 1986; Freire & Macedo, 1987; hooks, 1989, 1994; Minh-Ha, 1989, 1991; Solorzano & Villaipando, 1998). McCarthy and Moje (2002) looked at identity in relation to literacy and how individuals are "constructed and practiced within relationships of race, gender, class and space" (p. 228). They claimed that an identity is an "aspect of how humans make sense of the world . . . including their experiences with texts" (p. 228). Spatiality and hybridity theories illuminate how different identities might be interrogated in future literacy practices as they simultaneously challenge dominant notions of identity construction (McCarthy & Moje, 2002, pp. 234–235) and where cultural hybridities can "give rise to something different, something new and unrecognizable, a new area of negotiation of meaning and representation" (Bhabha as in Soja, 1996, p. 14).

Similar to spatiality and hybridity perspectives of identity, critical literacy perspectives of subjectivity suggest formations of self are "multiple, shifting and contradictory" and the "decentered self . . . pushes back on those identities, continuously shifting and changing, never fully locating oneself as for all in a particular identity" (Hagood, 2002, p. 255). Critical literacy as a theoretical field challenges dominant and oppressive structures and seeks to situate its theoretical research in a way that space and time are inherently part of its theoretical lens. This study appropriates from critical literacy as it builds on the work of Hagood (2002).

Hagood's (2002) seminal study illustrated how both postmodernism and identity can be coconstructed as the repositioned and destabilized the readers' gaze so that we might better understand the experience of the actant. Timony, a young man, had been marginalized by his teachers and considered at risk for a variety of reasons, but specifically for wearing angst-ridden clothing, for carrying a Kurt Cobain (the lead singer of the band Nirvana, who committed suicide) guitar pick which was perceived as a potential weapon and for reading texts about Kurt Cobain. From a structuralist view, the teachers assumed the stance that identity is associated with and situated within what we read, and because of that stance, Timony's identity and feelings of self-worth went unrealized by them. However, Timony's discourse at school illustrated that he was, to the contrary, a critic of teen angst and against Cobain's suicide. If his teachers had truly listened to him, they would have known and recognized that Timony's identity was negotiated outside of his reading of Cobain and that he transacted the construction of himself against the text, not through the text itself. Had teachers understood a poststructuralist perspective or understood how meaning and identity can be reconstructed, perhaps Timony would not have been labeled as "at risk." Sadly, though, Timony's discourse was misinterpreted by those in school and, subsequently, he was
positioned as an at-risk youth, Hagood's research admonishes us to reconsider the hazards of understanding situations or conducting research through myopic lenses.

REENVISIONING SPACETIME METHODS AND DATA ANALYSIS

Analyzing the configuration of social practices and the shifts across time and context can help educators describe, interpret, and explain the ways of interacting, representing, and being that accompanies learning. Such configurations of practice often rub up against one another and are not mutually exclusive. (Rogers, 2004, p. 66)

Methodology/Data Collection

The "methodological turn" for this study continues as we reconvision spatial and temporal research methods and data analysis. Data was collected over four and a half months, during which preservice teachers were observed and interviewed in two different contexts: in secondary English university classes and in their teaching placements. While data collection varied, identity artifacts revealed unique findings that had key implications. Identity artifacts are how interactants mediate (Holland, Lachotite, Skinner, & Cain, 1998) and stabilize a particular identity at a given point in time through an "instrument (material, tool, embodied space, text, discourse, etc.) that mediates identity-shaping activity" (Leander, 2002, p. 201). Participants were informed about the concept of an identity artifact, and they self-selected their own.

Appropriating analyses from critical discourse analysis (CDA: Bakhtin 1981,1986; Foucault, 1986; Rogers, 2004) and conversational analysis (CA: Wetherell, Taylor, & Yates, 2001) and viewing the findings through feminist and spacetime lenses, I reflected on the data that showed the experiences of the participants both in their university classrooms settings and in their field placements as they answered a series of questions about their experiences as learners and as teachers. Both CDA and CA align with feminism and spacetime because they are critical of how the epistemologies that are grounded in hegemony play out in schools and are concerned with understanding how power is involved in language and social relations in order to facilitate research for change and the emancipation of individual social relations in contemporary social life. What emerged from within the lenses of data analysis was a key methodological finding that helped to conceptualize all data: the matrix.

Matrixing the Data

The matrix. Janesick (1998), in her manuscript on considering the artful choreography of qualitative research design that she likens to a dance, urged researchers to push boundaries of methodology so that it becomes a meaningful and useful tool for future research designs. She reminded us that research alone should not mimic other studies for it is the design itself that can lead into new spaces for meaning and representation. Janesick influenced the development of the matrix. The matrix is an imaginary, yet real, space that emerged as a way to conceptualize the networked atomistic relationships that impacted teacher identity coconstruction. Although imaginary, it provides a way to frame and show how in spacetime and over spacetime intricate relationships network. Depending on the time in which an individual is teaching, he or she will be embedded by a different network of relationships. The matrix in 2004–2005 differed from the matrixes in 2006, 2016, and 2096.Inside of Fig. 16.1 is a generic spatial map that illustrates several of the atomistic relationships that might be coconstructing identity at any given point and time. The inside of the matrix shows a dotted line, or the rhizome, which cannot be separated from the matrix as it is its lining, so to speak. The two are intimately connected and together they form a networked space where relationships intersect, are concentric, do not intersect, and can be parallel, nonparallel, perpendicular, oblique, fragmented, and even marginalized. As a theoretical concept the matrix is both an invisible and visible space, which embodies all of the forces coconstructing identity.

Critical discourse analysis. By placing data in the matrix, I applied CDA to interrogate what identity artifacts meant or symbolized to the participants' preservice secondary language arts teacher identities and how they interacted with various texts including curricular, political, and material artifacts. I borrowed Bakhtin's (1986) definition of text, which includes all written or visual material, that are created with specific audiences in mind and are produced in anticipation of particular responses so they are, therefore, interactive. Texts for this study evoked semiotic responses between the reader and the text (e.g., television shows, conversations, films, billboards, syllabi, mission statements, etc.). By semiotic, I mean the "meaning-making through language, body language, visual images or any other way of signifying" an interaction with and through texts (Wetherell et al., 2001, p. 229).

As part of CDA, I focused on interactional analysis and interdiscursive analysis. While interactional analysis seeks to describe how texts are seen relationally as semiotic activity, interdiscursive analysis works from the assumption that texts mix genres and discourses and that some texts and discourses are hybrids (Wetherell et al., 2001, p. 241). The "heteroglossic" nature of texts has the potential to produce

![FIGURE 16.1 The matrix—an example of a generic matrix and the atomistic relationships coconstructing a preservice teacher identity](image-url)
hybridized identities. An aim of CDA is to position the self within the project, to become part of the social world in which the research is conducted, and to use some self-description and relation to the topic in the data (Wetherell et al., 2001). It was my intent then to understand preservice teacher identity and the semiotic experiences for both identity and material artifacts in the context of life and understand what significance they have for participants about their teaching identities through interview protocols. The matrix illuminated the rhizomatic interactions and on-intersections of data.

**Conversational analysis.** CA furthered the "methodological turn" because it allowed me to analyze transcriptions from interviews and observations of students in their teaching placements and in their coursework. I looked at how the naturally occurring discourse among participants' in-group interviews in their teaching placements and in their coursework showed the landscape in which they have come to interpret what their preservice teaching identities meant to them. In developing the matrix even more, I scrutinized the data for examples that illustrated how participants interpreted their teaching identities as they interacted in their coursework with peers and instructors, in their teaching placements with colleagues, co-operating teachers, and clinical supervisors, and in their cohorts. Since CA attempts to identify and describe language as it naturally occurs, it was not my intent to reveal underlying issues or beliefs for why their teaching identities mean what they appeared to mean; rather, it was my intent to investigate and share by identifying and describing their naturally occurring languages and their interpretations of what their teaching identities meant to each of the participants.

**Feminist lens.** A feminist analysis of data, like CDA and CA, is guided by some basic ethical principles, most of which are relational and based in reciprocity. Feminist research seeks to look for ways that authenticate the human experience and validate the differences that each person has. In my analyses of participants' responses, I was sensitive to the ways that masculinity has been reproduced through discourse and how that inevitably affects male responses. It was my intent to describe all participants' stories as authentically as possible through a combination of portraiture and narrative (Lawrence-Lightfoot & Hoffman Davis, 1997; Ritchie & Wilson, 2000) and to discuss at length any portion of content that I did not fully understand with my male participants. Not to do so perpetuated a female authoritative stance on male insights, which only further creates hierarchies of power. By employing feminist analysis, some of the power differentials were eradicated (Blakeslee, Cole, & Comefry, 1996; Rich, 1977).

**Spacetime findings and their representation.** Findings converged along two metataxonimies: constructed through critique and constructed through "windowing." "Constructed through critique" references the notion that teachers largely saw themselves being constructed through their own critique of the teacher practices or beliefs of co-operating teachers, veteran teachers, or administrators. It was embedded within their critique that I unpacked their dissatisfaction with some element of how they were being constructed by those in positions of power.

"Constructed through windowing" draws from the physicality of a window as something we can see through that sometimes reflects back our image if sunlight has hit it at a certain point in the day, or it is something we can see through, which projects images outside of our periphery. Student teachers when constructed through windowing saw either aspects in others that they appropriated into their teacher identities or aspects of what they hoped to eventually emulate but which were beyond their present reaches. When we apply the idea of a window to the context of this study, we see that it acts as a reflection when participants saw in others aspects of ideals they wanted to instantly embody because they were capable of such an act during a spacetime, such as admitting one's ability to engage students or possessing the ability to deflect an argument. When participants knew that they hoped eventually to embody something, but because of their fledgling status did not embody it during this spacetime, such as a depth and breadth of knowledge on a text or understanding the interplay of literary allusions from text to text that acts as a future projection. Hence, this projection manifests in thirdspace as the "creation of another mode of thinking about space that draws upon the material and mental spaces of the traditional dualism but extends beyond them in scope, substance, and meaning" (Soja, 1996, p. 11).

**REENVISIONING PRESERVICE TEACHER IDENTITY THROUGH JACOB**

The findings that illuminated how preservice secondary language arts student teacher identities came to mean fell within larger metataxonimies, including five thematic areas: meaning (what something means to the participant such as teaching, learning, or observing), the value systems of the participant, expectations about the profession, communities of learning that apprenite the teacher, and policy, research, its interpretation, and its impact on communities of learning. I use Jacob's data to illustrate methodologically how his identity was constructed. The theme of meaning is used to contextualize his case study and is juxtaposed through the larger taxonomies of constructed through critique and constructed through windowing.

**Jacob**

Jacob, a 32-year-old, Chinese/Eurasian, working-class male, grew up in an upper-middle-class Buddhist household in the Pacific Northwest with loving and nurturing parents. Initially a self-identified "gifted bad kid" who devalued education, he now feels committed to helping young people create social change by giving them the tools to think critically about literature and through written expression. He strives to expose his students to ideas outside of their indigenous lives so that they can make informed choices about their futures and recognizes that for him the battle is in motivating students to want to learn when they already have a long history of resistance already instilled. I initially met him when he was a student in a class on teaching pedagogy that I taught prior to the year he dropped out of the secondary English education program. His return frame his story.

Jacob was an outspoken and inquisitive member of the Secondary Language Arts Cohort (SLAC) who was eager to grow and learn. Unique to his personality was that he did not like to follow the pack. He demonstrated this through counterdialogic, assignment completion, and his outside hobbies. During the same year, I worked with him he dropped out of the program because of poor relationships with his clinical supervisor and his co-operating teacher, who...
thought that he was ill suited for teaching because of their perceptions of his performance in a classroom for remedial readers and his struggle to make necessary accommodations for them. His experience countered his supervisors’ for he felt that his students enjoyed his sense of humor, attended his classes, and were doing their school work and that he was teaching them. His faith in his ability to teach however was unshaken although his teacher identity destabilized because teaching a class he was ill prepared to teach was a setup for failure. He admitted that he knew he had much to offer students and that he knew others’ perceptions were a mismatch from his own. He said the system was at fault for not training him to work with these special needs students and he decided to dropout.

Upon return to the program the next fall he rededicated himself to making his teaching placement successful and in completing the program by the end of the fall semester. During the time of the study, I supervised Jacob when he was assigned to teach 10th grade at Carlos Martinez High School, ruralistically situated in the southwest with a predominantly Native American and Hispanic student population comprised of students from the nearby reservations. Many of his students came from a lower socioeconomic bracket, and they were exposed to excessive substance abuse and poverty; however, most students were meeting the expected skills for grade level. His school had not faced probation from the Public Education Office and was making AYP under NCLB. Based on conversations with his students, Jacob confirmed that most of his students were likely return to their nearby reservations after graduation from high school in order to support their families.

Meaning Constructed Through Critique

The meaning of Jacob’s teacher identity came in part through his negotiation against others in his communities of learning. Meaning began through his own apprenticeships in the communities in which he engaged and then through how such meanings were either expanded or shifted within and by the communities of learning that were apprenticing his teacher identity. Although several communities impacted meaning for him, I focus on his experiences in the school space. Embodied by a culture or community are the values and practices it embraces and where meaning is birthed. The space-time that the original meanings of his teacher identity came to be differed from the space-time that his teacher identity fortified. The spaces he inhabited and the time inhabited by him in that space made his teacher identity vulnerable to destabilization. The critiques he shared with other participants helped to illuminate what his teacher identity meant to him and revealed similarities between participants’ meanings.

While many factors helped Jacob understand his teacher identity, the meaning of his self-selected identity artifact most strongly illustrates this as it intersected with the expectations placed on him and from other teachers. Jacob’s teacher identity was grounded in the artifact of a photo of his parents that he started reflected their unconditional love of him. The photo represented their support over the years and for giving him the freedom to make choices about his goals and belief systems. Although he was a “gifted bad kid,” his love of art and literature in high school took on new meaning in his adulthood. Such reminders took on meaning within the context of his school. He determined that the best way to support his students was to firmly embed himself within their experience because recognition of his students’ communities could help him be a more effective educator for them. As a result, he felt he would be better prepared to support his students’ values and their educational and sociocultural needs. His co-operating teacher affirmed his teaching and his efforts to know the families of his students. He met with families and Elders in order to assess what students needed in the classroom. He felt it was his responsibility as an educator to do whatever it took to know the students in the school space where he taught. As a novice, Jacob believed that it was his responsibility not to assimilate them to the system of the oppressor rather to build a bridge between the two, which meant to honor both state and school expectations and standards. His critique of the state standards was that they did not adequately reflect the sociocultural needs and values of his Native American students. He believed that when one connects personal meaning such as individual oppression, prejudice, or even love, to events, texts, and other areas of learning it increases one’s ability to think for oneself. As he sees it, when one is taught to think critically about material and the world around them, it can lead to the possibility of agency, self-empowerment, and then toward creating both personal and systemic social change.

What we see has happened to Jacob’s teacher identity is a resitability. Conversations between his peers, clinical supervisor, co-operating teacher, and university instructors assured him that this time around, he had every right to determine the kind of teacher he wanted to be in negotiation against or toward his co-operating teacher and clinical supervisor. Nonetheless, he protected himself this time because of prior experience by creating a temporal border, a time-based border, around his teacher identity to help him resitabilize until he had his own classroom. Although he spent a semester with a new co-operating teacher, who admired his ability for her ability to describe literary allusions from text to text and for her knowledge sustained by 30 years of teaching English, he observed her teach in a way that was dissonant from his own beliefs about teaching. He found her style to be “old school and dull,” while he observed her unable to connect to her students’ lives. He consciously negotiated his teaching identity against that aspect of her teaching. As he studied and participated in other communities such as the university and his cohort, and was validated in his beliefs, his teacher identity stabilized. Although he still struggled at times to connect material to students’ lives and to teach content, it is important to keep in mind that his teacher identity remained intact because his values aligned with those in power outside of the classroom space. Perhaps had his network aligned with his values, he might have dropped out of the program a second time as he had during the first year when he lacked support and validation.

The networked matrix of relationships in Jacob’s teaching life may not be obvious yet they included his students, their families and their sociocultural values, his university instructors, his clinical supervisor, his co-operating teacher, his family, his cohort, his prior teachers, school curriculum, and state and school standards. Each of these aspects of the matrix intersected and each was simultaneously co-constructing his teacher identity. For Jacob, meaning of his teacher identity was generated by the contexts through which he learned and he was socialized. How he came to make meaning of his teacher identity largely impacted how he saw his role as an English teacher.

* There were other pieces of this networked matrix participating in his teacher identity coconstruction but they are beyond the scope of this piece.
Meaning Constructed Through Windowing

Many relationships were less obviously impacting the meaning of Jacob's teacher identity in thirdspace. These relationships cannot be separated because each one affects the other, and his participation in various relationships created links to others. Regardless of the nature of his relationships, they impacted how he participated and how his teaching was influenced. He had a unique relationship with the network. Since the overall network is reconstructing his teacher identity, no one particular relationship is singled out. Where one relationship might be poor or cause destabilization, another might help stabilize the teacher identity.

The matrix actualizes the concept of "windowing" as we also consider that Jacob was a nontraditional learner and teacher. His story provides a glimpse into his ultimate success as a preservice teacher. Recall that he dropped out of the SLAC the year prior because he did not feel supported in his teaching practices, which destabilized his teacher identity. He was also heavily criticized by those in power over him for his unorthodox and nontraditional methods of teaching. Jacob did not want to be a mainstream teacher. He wanted to follow a path all his own that spoke to his inner sense of self. Jacob, unlike many of his peers, could connect with any student, any time, and anywhere. His offbeat sense of humor and his ability to both understand and connect with students who have been marginalized by dominant society made him all the more effective in the classroom. His own background as a "gifted bad kid" sensitized him toward students who were not part of mainstream society. As part of the expectations for the program, he was required to observe veteran English teachers in his school. He noticed that some teachers were "ghetto and boring" while others were "innovative and engaging." He respected his co-operating teacher's knowledge of texts and literary allusions and hoped someday to emulate it. Through the process of observations, he picked up teaching ideas and negotiated his teacher identity both toward and against the teachers whom he had observed.

While Jacob struggled for acceptance the first year in the program, he did not struggle during his second year because the network of relationships that were reconstructing his identity shifted. This networked matrix, which formed a heterotopia for him—a "real" place where there is a "sort of mixed, joint experience" or a "counterzone," occupied and created by those who contest the dominant sites (Foucault, 1986, p. 24), affirmed his teacher identity and helped to restructure the kind of teacher he wanted to be, affirmed what his teacher identity meant to him, and reinscribed a place for him in the profession.

The matrix is a simulation for the real, and the hypereal, it is a space that has been divested of the "anti-real" and is more real than the real, and because of that must vanish into simulation. The matrix is a space that binds all of the factors that coconstitute coconstruct teacher identity and takes on its shape because of its fluidity and its ability to change and morph as changes occur politically, in the lives of teachers, or socially. As a signifier of the fluid nature of teaching, it is important to recall that Jacob, like Timone (Hagoed, 2002), was at risk of being mislabeled, but as we recontextualize Jacob's predicament in the classroom during year one through a different lens, such as the matrix, and in applying thirdspace, we see that Jacob wasn't the problem—it was the myopic view of some. There are indeed places and spaces for different types of teaching styles and pedagogies that need to be enacted and performed.

In conclusion, as we continue to mine the matrix we can begin to unpack how preservice teacher identities are being coconstructed and, from there, foster and cultivate teacher identity. Consequently, we offer student teachers tools to help them co-opt their own teacher identities and consider how to negotiate with the elements that are coconstructing their teacher identities. Jacob might have become a teacher dropout statistic but thanks to the overall networked matrix coconstructing his teacher identity, he remains in teaching. Although reconstituted in his teacher identity, this change in the network that was coconstructing his teacher identity speaks then to the need to cultivate and nurture diverse teachers who can meet students during any spacetime.

REENVISIONING TRANSDISCIPLINARY RESEARCH: IMPLICATIONS FOR EMERGING METHODOLOGIES

Implications for this study emerged from the methodology not atomistically but rather relationally at their intersections and nonintersections within the frame of the matrix that collectively contributed to the identity of the teacher and which activates our thinking about future research in the visual and communicative arts. First, research can foreground the matrix as a methodological frame to study the environment for educators and as a space wherein participants are contextually situated. Such a frame can become part of the methodological framework for future conversations around spacetime and utilized as a tool for analysis on how to understand specific identities. Although imaginary and real, it provides a way to frame and show how in spacetime intricate relationships are networked so that the fluid nature of the matrix has efficacy in other research contexts and spacetimes. By looking at the matrix during different times and by examining the relationships within it and within different spaces, we can reflect on what is coconstructing a participant during any given spacetime.

Next, by applying the larger taxonomies that emerged from this study, "constructed through critique" and "constructed through windowing" to other transdisciplinary studies, we can further our understandings about unpacking data through a matrixed approach about identity, and specifically teacher identity construction during a spacetime. Looking at the concept of "constructed through critique" within the matrix, we not only validate and honor the voices of our participants, we also open up to new possibilities of understanding some of the necessary tensions facing them and enter into new spaces of investigation that speak to the realities of our participants. Looking at the concept of "constructed through windowing" through the matrix, we position ourselves within hybridized frameworks that will continue to morph in different spaces and contexts. The intersection of windowing with hybridized frameworks expands awareness into imaginative spaces. By pairing critique and windowing, and since each are infused with nonbinary meaning making, together they have the potential to be lifted and applied to contexts that have far-reaching implications. Over time, such concepts can be traced and referenced as a technique for data analysis within a matrix or in some other capacity.

Third, if our intention is to further a research agenda that challenges dominant society, our research must lead to both symbolic and literal theoretical border crossings and nonbinary thinking which
can lead to new possibilities of making meaning in the visual and communicative arts. From a postmodern lens, research that is transdisciplinary by its nature is meant to challenge dominant binary thinking. Such a framework reframes our understanding about how teachers are coconstituted and reconstitute through different contexts altogether. Thirdspace can open up doors toward liberating methodologies from binary results. Such spaces can be all inclusive, multifaceted, and multidimensional, where the “same” and the “other” come together. If we aspire to conduct studies that authenticate the actual experiences of all individuals, some of whom may think outside of firsthand andsecondary binary constructs, research must mirror such experiences. To negate findings from nonbinary perspectives reifies the notion of exclusion and reinforces binary meaning making.

Lastly, we need forums to conduct transdisciplinary conversations about spatiality and temporality in research across theoretical fields. Such a space can serve as a venue for other critical discourses to share ways of collecting and interpreting data that are informed by spatiality and hybridity theories. Such a space can serve as an outlet for the dissemination, critique, and problematization of spatial methodologies and human geographies. Conversations with other disciplines can expand our understanding of the conditions that are coconstituting research methodologies and perhaps help create shifts within our own disciplines.

PROLEPTIC SPACETIME CONSIDERATIONS

Research in the visual and communicative arts must be responsive to how it is coconstituting identities because it is a key participant in creating the actors who will participate in the democracy in which they exist. If we hope for education to help challenge oppressive paradigms and binary thinking, and if we hope for our society to grow more liberal, free, and toward social justice for all, then our research agendas must reflect those values we embody. We need to remain thoughtful about our methods of inquiry and be conscious about how types of inquiry can reproduce dominant concepts that entrap education in anachronistic paradigms. If we are to expand our own thinking and the boundaries that create the boundaries for teacher education, we must continue to create interdisciplinary approaches through transdisciplinary ways of analysis. Danielewicz (2001) said that teacher education programs should foster teacher identity development to the highest degree possible. In helping student teachers recognize their own identity constructions they become more informed about their own subjectivities which can empower them to challenge being co-opted by hegemonic-based discourse and thinking. Recognizing that their own teacher identities are situated within a complex networked matrix of spacetime relationships, can help them negotiate their identity constructions through both critique and windowing, and help them relocate to spaces that stabilize their teacher identities. Preservice teachers can be technological actors who participate in coconstituting the identities of their own students across time and space and can teach their own students how to co-opt their own identities so that they are subservient to hegemonic thinking and power structures. We have a social responsibility to both conduct and analyze research through innovative methodologies that can help sustain and reconstitute potential participant trajectories. Jacob’s state of destabilization is the consummate actualization of Cochran-Smith’s (2004) admonishment for teacher education to be conceptualized as both “a learning problem and a political problem” (p. 2). By reconceptualizing and reconsidering findings through the visual and communicative arts, methodology has the potential to contribute to systemic change.

Educational researchers can continue to transcend the local by reconceptualizing how they conduct and reconceptualize research as they reconsider its dichotomous nature. We must reconsider for what purposes we are conducting research if we intend to have far-reaching personal, social, and political implications for our works in the visual and communicative arts. Methodologies in the visual and communicative arts must continue to be understood through postmodern lenses that can be disseminated across time and space. If education is to move toward social justice for all and gain privilege, we cannot address the learning without also addressing the political. Empowering ourselves with innovative methodologies will help us connect education to globalization because global processes, cultures, and technologies will continue to regenerate like transformers that have far-reaching implications for global literacies.

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