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Professional Inquiry for Inclusive Education: Learning amidst Institutional and Professional Boundaries

Abstract

We examined how an inquiry group composed of a university professor, three doctoral students, and a grade level team of seventh and eighth grade teachers negotiated their collaborative work. This effort resulted in the development of a two-week unit that tapped into students' out-of-school knowledge. Our research question asked how learning occurs within a boundary practice formed by university and middle school participants. We used analytical tools from grounded theory to analyze videos of meetings between university and school personnel, field notes, and meeting artifacts (e.g., handouts, readings, products). Participants engaged in a dance in which boundaries among institutions and professions were sustained *and* challenged. The inquiry project became an open ended learning zone in which all participants sought and gave support in joint action, expanding the mutual understandings of the object of their work (i.e., the daily lesson plans and overall unit of study). We recommend developing relational agency (Edwards, 2007) to engage in inquiry projects for inclusive education that dismantle complex and intersecting forms of exclusion.

Keywords: inclusive education, inquiry, professional learning

Introduction

This paper delves into the complex learning that occurs when professionals from different disciplines and institutions, with different biographies and expertise, engage in inquiry for inclusive education. We examine how a group composed of a university professor, three doctoral students, and a grade level team of seventh and eighth grade teachers negotiated the development of a two week-unit that tapped into students' out-of-school knowledge. In this paper, we focus on professional learning and identity development that occurred amidst institutional and professional boundaries. In particular, we were interested in the following question: How does learning occur within a boundary practice formed by university and middle school participants?

We echo Deppeler's and Ainscow's words in the introduction of this special issue: "the big challenge for those who are concerned with school effectiveness and improvement is that of achieving equity." This project, like our work elsewhere, was

grounded in furthering an inclusive education agenda (Artiles, Kozleski, Waitoller, 2011), with a particular eye on equity issues. We acknowledge that inclusive education had and has multiple and sometimes divergent meanings, which generates confusion and conceptual ambiguity. To borrow from Peter Clough, inclusive education "is not a single movement. It is made up of many strong currents of belief, many different local struggles and a myriad forms of practice" (Clough, 2000, p. 6). To address this conceptual ambiguity, we have recently advanced an articulation of inclusive education (Waitoller & Artiles, 2013) that foregrounds educational equity and incorporates much of the current discourse on social justice and inclusive education:

> The inclusive education movement should constitute an ongoing struggle toward (a) the *redistribution* of access to and participation in quality opportunities to learn (redistribution dimension), (b) the *recognition* and valuing of all student differences as reflected in content, pedagogy, and assessment tools (recognition dimension), and (c) the *creation* of more opportunities for non-dominant groups to advance claims of educational exclusion and their respective solutions (representation dimension). (Waitoller & Artiles, 2013, p. 322)

Inclusive education offers a way to attend to intersecting forms of marginalization within education. It also acknowledges that inclusivity and its ever-present companion, exclusion, are shifting targets because of the dynamic nature of human systems. Overcoming exclusion and moving towards deeper and more expansive forms of inclusivity demands a continued vigilance of how margins shifts across geographical, socio-cultural, political, and temporal spaces (Artiles & Kozleski, 2007; Corbett & Slee, 2000). These dynamics envelope practitioners as they go about their daily work. Therefore, an important aspect of the inclusive education project is professional learning. Professional learning efforts can become an affordance in achieving such an ambitious agenda.

Professional Learning Research for Inclusive Education

Professional learning is a pathway for school improvement efforts (Knapp, 2003). Improving schools demands engaging in transformative practices that (a) eliminate marginalization, (b) offer access and opportunity for participation, and(c) engage students

in their own social action agendas (Gutierrez & Vossoughi, 2010). After all, what teachers do in schools is the single most important school factor in improving the learning experiences of all students (OECD, 2005). Research on professional learning for inclusive education has tended to focus on action research inquiry projects in which university and school staff work together to improve the experiences and outcomes of *all* students (Waitoller & Artiles, 2013). This body of research has highlighted the potential of collaborative work among university researchers and classroom teachers to increase teacher capacity and efficacy in inclusive practices, to create school wide programs for inclusive education, improve school practices and to challenge teachers' deficit views of students with learning difficulties (Waitoller & Artiles, 2013). Yet, the bulk of this research tends to be based on a narrow conceptualization of inclusive education that focuses on instructional strategies to mainstream students with disabilities into the general education classroom. This conceptualization of inclusive education is blind to the fact that students experience complex and intersecting forms of inequities (Waitoller & Artiles, 2013). Instead, inquiry projects need to be informed by an equity grounded conceptualization of inclusive education such as the one we defined in this paper.

In addition, research on inquiry approaches to inclusive education has relied heavily on descriptive accounts of events without a robust theoretical interpretation of how professionals learn as a result of collaborating with members of other professions and institutions. This is unfortunate as collaborations across professions and institutions are at the core of inquiry projects and are needed to dismantle intersecting and complex forms of educational exclusion (Waitoller & Artiles, 2013; Waitoller & Kozleski 2013).

Power struggles and tensions are ubiquitous in these projects as participants engage in implicit and explicit negotiations about what and whose practices and knowledge are valued (Authors and others, 2013; Authors, 2013b; Rosenberg et al., 2009). In other words, there are struggles over whose partnership is it and whose agenda should be implemented (Author and Colleague, 2010). Thus, it is critical to understand how professionals from different institutions (e.g., schools and universities) engage in both maintaining and negotiating their professional and institutional identities and how professional learning occurs amidst these negotiations (Author, 2011).

To address these knowledge gaps, this paper presents the findings of a teacher inquiry project that brought together university researchers and a middle school grade level team to create a unit of study. Of particular interest to teachers and researchers was the possibility of creating an educational experience that (a) provided access and various levels of support for all students and (b) drew from students' funds of knowledge (González, Moll, & Amanti, 1995) which positioned them as experts, giving them a space for political claim to who they are. This kind of curriculum work is important in the work of inclusive schools since it creates the space for students to narrate their own identities, understand the journeys of their peers, and build more inclusive cultures within their classrooms and schools. However, designing this kind of unit was fraught with difficulty since the fundamental premise of the unit repositioned teacher and student identities and authority. Though our analysis focuses on the work of teachers, doctoral students, and university faculty, the story of how this project unfolded offers many lessons for re-mediating the work of teachers, students, and researchers who want to engage in such work alongside their teacher colleagues. To understand the complexities of this work we theorized inquiry approaches to inclusive education as boundary practice (Wenger, 1998).

Theorizing Inquiry Approaches to Inclusive Education as Boundary Practices

Cultural Historical Activity Theory (CHAT) (Engeström, 1987) guided the analysis as well as the literature on boundary practices (Akkerman & Bakker, 2011; Star & Griesemer, 1989; Wenger, 1998). This lens for examining inquiry approaches and professional learning for inclusive education helps to understand and address intersecting forms of exclusion (Colleague and Author, 2013). CHAT conceptualizes practice as historically situated activity (Leon'tev, 1981). Activity systems are complex social organizations in which human activity consists of (a) subjects (e.g., teachers and university faculty), (b) the object or objects of activity (e.g., student and professional learning, the design of the lesson), (c) the community in which the activity is situated (e.g., the school community), (d) the rules (e.g., policies, school, and university arrangements), (e) the division of labor (e.g., who presents information and who receives it), and (f) the artifacts of the activity arena (e.g., the material tools of each communities

and their understandings of the inquiry project and inclusive education) (Engeström, 1987).

When university faculty, doctoral students, and classroom teachers engage in an inquiry project, the historically evolving activity systems of school and university overlap, forming a *boundary practice*. A boundary is established when two communities of practice engage in joint work in ongoing bases (Wenger, 1998). It is the division between what is familiar and unknown (Kerosuo, 2001). A boundary practice is multivoiced, multi-scripted, and is characterized by the disparate histories, toolkits, policies of different communities of practice and the multiple views of stakeholders. This disjuncture opens spaces to transform conflicts and tensions into the learning zones (Engeström, 2001). Indeed, boundaries are the source of difficulties and tensions, but also offer the potential for learning and identity development. Learning emerges as coalitions between different perspectives occur in boundary practices (Kerosuo, 2001). As the participants search for their joint object construction and redefinition, they find and redefine the problem at hand (Engeström, 1999). Thus, boundary practices are sites where teachers, university professors, and doctoral students challenge their own ways of thinking and acting, affording the opportunity to learn from each other and expand their understandings of the object of their joint work.

Negotiating and crossing boundaries is not a smooth enterprise. As members from different communities engage in inquiry projects, they sustain and challenge boundaries, which can end in a reconstruction of the boundary itself (Kerosuo, 2001). Participants of inquiry projects can resist engaging in a collaborative discussion. Authority and power are ubiquitous. Participants may use their own expertise and cultural artifacts to claim authority and structure interactions or they may rely on hierarchical structures (e.g., principal-teachers and university professors- teachers) to control the speaking floor (Kerusou, 2004). As these tensions are developed and resolved, participants' identities are challenged and changed. Indeed, this paper conceptualized identity as fluid and situated in particular contexts as participants draw from the tools of their communities of practice to enact who they are and participate in joint activity (Gee, 2000; 2001).

This analytical lens is critical to understand how to dismantle complex forms of exclusion as this task demands interdisciplinary and inter-professional work (Waitoller &

Artiles, 2013). Having boundary practices as units of analysis affords researchers to examine how people from different institutions, professions, and disciplines collectively address intersecting and complex forms of inequities and how learning occurs as a result of their collective work. Following this theoretical lens to understand inquiry projects for inclusive education, we answer the following research question: How does learning occur within a boundary practice formed by university and middle school participants?

Method

Setting

The study took place at Rosario, an elementary and middle public school, located in an urban district in the southwestern United States. The district served about 7700 pupils. Rosario had 682 students and 42 teachers. Ninety four percent of the students were Hispanic, four percent were African American, and the remainder divided between students who were White (1%) and Native American (1%). Special education students accounted for 12% and English Language Learners accounted for 32% of the school enrollment. Aggregate student performance on state exams hovered around 50% in mathematics, reading, and writing.

Rosario offered a Dual Language (English and Spanish) program strand in the elementary grade levels, consequently much of the staff was bilingual and/or bicultural. The middle school configuration offered a different experience than the elementary grades: (1) a structured English immersion program was offered, taught by one teacher; (2) four core content subjects, each taught by a different teacher so that students rotated through different classrooms and teachers; and (3) there was an influx of new students from beyond the elementary grades boundaries because of their performing arts focus.

Participants and Activity Arena

Participants in this study included the five middle school teachers, three doctoral students who served as research assistants, and one university professor (see Table 1). Two of the teachers were in their first year teaching (i.e., Ms. Kurt and Mr. Menz) and Ms. Perez had taught for two years but was in an interim position. Two teachers had more than five years of experience (i.e., Ms. Tevez and Ms. Carter) and had prior experience with an inquiry group. All of the university team participants taught in

schools for a number of years. Dr. Gravett was an experienced professor and researcher who had been in academia for over 30 years. The research assistants were in their second year of their doctoral programs.

After a long process of negotiation between the university team (i.e., Dr. Gravett and the doctoral students) and Rosario's administrators, the university team engaged the entire school faculty in a series of focus groups to explore their interests and commitments to collective action to improve school outcomes for Rosario students. At the end of that process, the school faculty and the university research team had begun to develop some connections. After sharing focus group findings with the entire faculty in an open forum, a set of grade level teachers were interested in working with the university team. The principal wanted to focus on improving outcomes at the middle school (7^{th} and 8^{th} grades) and encouraged the middle school team to participate, although they were not necessarily among the volunteers. In fact, the university team had a couple meetings with the identified middle school team to negotiate the terms of their project, what would be expected of both parties, and the timeline for the shared endeavor. Some members of the middle school team were interested in the work; others, persuaded by their co-workers and encouraged by the principal to participate, agreed to participate. Thus, different members of the project had various levels of commitment and interest in the activity.

The activity arena for the analysis presented in this paper were the six meetings in which the university team and the middle school team designed a two-week unit according to the interest expressed by the teachers: creating an integrated curriculum across their content areas, increasing student motivation and engagement, and reducing problematic behaviors. To address these interests, both the university and the middle school team decided to use cross-content curriculum mapping (see Drake 1998, Drake & Burn, 2004); cultural modeling (see Lee, 2007), and digital storytelling to inform the design of the two-week unit.

Data Collection and Analysis

Data sources included (1) video recordings of the six meetings between university researchers and teachers, (2) participants' field notes, and (3) meeting artifacts (e.g., handouts, readings, products). We used axial coding (Strauss & Corbin, 1990), writing

memos that synthesized our codes by comparing and contrasting codes with one another. This was an iterative process in which we ensured that the memos accurately represented the codes. By engaging in this dialectic process, we achieved a deeper analysis of the data from which overarching conceptual categories emerged (Charmaz & Mitchell, 2001). We turn now to the findings of our analysis.

How Does Learning Occur Within A Boundary Practice Formed By University And Middle School Participants?

Learning at the boundaries evoked comparisons to the moves of novice dancers learning to move together. At first, the moves were rigid, designed more to mark professional and institutional identity boundaries than to blur them. The dancers contested whose expertise and knowledge and what kinds of identity should be valued and followed. While the first three meetings were distinguished by a fixed division of labor that sustained expertise boundaries; the remaining meetings became increasingly an open learning zone in which the teacher team and the university team learned together, expanding each other's understanding of the object of their joint activity (i.e., a two-week unit). In other words, the dance became more fluid and boundaries were blurred as the teams drew from each other's perspectives to appropriate collectively new tools and enact more fluid identities. In the following sections, we demonstrate how identities and the tools that convey authority intertwined to both sustain and blur boundaries.

Whose beat are we following? A choreography of sustaining identity boundaries through mediating tools

Although the teachers and researchers shared an endeavor, they brought institutional identities to the work accompanied by unspoken and unexamined authority, different tool sets, and unfamiliar discourse patterns. The university researchers and the Rosario teachers entered the partnership work well aware that the research team was vested more authority than the teachers in authoring the joint work. For instance, the institutional authority of the university team afforded the teachers the ability to veer from their daily practices that were normally very tightly monitored and enforced. Consequentially, teachers had more time to engage in the inquiry project. In this sense, authority is synonymous with power. In our analysis, we found that the university team

worked diligently to use discourse as a tool to disrupt some of the power imbalances in their relationship with their teacher partners with statements such as "You all are the drivers. We're just the passengers. You're driving the car" or by framing suggestions very intentionally as non-answers with words such as "could" and "would." However, the discourse tended to slipped back into staking out authority because of two avenues used to determine and sustain power. First, establishing identity is a way of claiming authority. Second, tools themselves convey authority to their users and their identities.

Sustaining boundaries through claiming institutional and professional identities

Beginning work together often entails members situating themselves and others according to authoritative positions. Different identities seemed to possess different forms of power. The Rosario teachers generally claimed their authority through the subject matter they taught (e.g., math teacher). One way this happened was through the use of titles which can define a social hierarchy within a group. This positioning began when the research and teacher groups were introduced:

Dr. Gravett: So, for the benefit of the camera, can we all go around and say our name?

Ms. Kurt: Ms. Kurt, I teach seventh and eighth grade Math.

Dr. Sanders: I'm Dr. Sanders, the principal of Rosario.

Dr. Gravett: I'm Katherine Gravett, a professor at the local university.

The rest of the teachers followed their peers' introductory pattern (Mr. or Ms. Last Name, subject matter). In contrast, the researchers introduced themselves by their first and last names and their institution's name. Each pattern is a claim to some sort of identity and authority. For the teachers, the claim was to the subject matter they were teaching, for the principal it was to her title and authority over the school. The researchers claimed their institutional affiliation but sought to balance their institutional status by forgoing the use of a personal title before their names. These initial claims were not static; depending on the context and purpose, identities were enacted dynamically to claim or diminish authority as we demonstrate later in these findings. This maintenance of boundaries through claiming institutional and professional identities and claim authority was supported by the tools that each team brought to the inquiry group.

Tools convey authority

The university group brought tools to accomplish the work at hand. This most often consisted of PowerPoint handouts, pedagogical tools (i.e., cultural modeling, digital storytelling), and agendas for the meetings. The teachers also brought a set of tools: state standards, schedules, knowledge of the technological resources available, a political analysis of the school context, and a working knowledge of their students. Tools were attached to different institutional identities, and, in some ways, acted as barometers for participation. Familiarity with the tools being used to accomplish the learning generally dictated who participated and how. For example, when the primary tool being used was a handout explaining curriculum mapping, cultural modeling and digital storytelling, the research team's participation spiked. The person or institution that introduced the tool generally had more authority in its use and lead the discourse interaction among participants. For instance, the first few meetings overwhelmingly relied on the tools the research team brought with them. During these meetings, the research team initiated the majority of the discourse, with the teachers playing more of a peripheral role as they gained familiarity with the tools. The third meeting began with the following interaction:

> *Dr. Gravett:* So we planned the day to give you a sample of some of the different kinds of things that we want to do as a team as this project unwinds. To give you a view of some different kinds of experiences and exploring different kinds of options, what may fit, what may work.
>
> *Mr. Waltz:* We brought some ideas according to your comments last meeting [..] we chose three particular practices. The first one is curriculum mapping; some of you mention that you did something similar. The second one is called cultural modeling and uses what students already know to teach content area knowledge [..] and the third one is identity stories using digital media.

After this introduction to the day's agenda, the university team taught these three practices to the teachers, and then a time was dedicated to discuss the practices, ask questions, and then apply them through an exercise. This sequence of interactions formed a participation format similar to that of a university seminar, positioning the university as experts and teachers as novices.

While the university team used meeting agendas and their expertise on the three proposed practices (i.e., curriculum mapping, cultural modeling, and digital story telling) to demark expertise boundaries, teachers brought to bear in the discussion issues of logistics that positioned them as the experts as they were more familiar with the school's arrangements and resources. For instance, the following interaction took place at the end of the third meeting. We numbered this excerpt so that readers can connect the conversation to the discussion that follows.

Dr. Garett: So, how are these practices we presenting make sense to you?

Mr. Menz: I like digital storytelling as an end of the year portfolio.

Ms. Kurt: How would we envision doing this in our department? I mean who will be responsible to take the class time to work on that? Is one teacher going to head that up? How soon will we do it?

Dr. Garett: Are you a team?

Ms. Kurt: We all share the same amount of students that rotate in groups of 25.

Dr. Garett: Is it possible that you can do one week in each room? Rotating the responsibility? So over the course of May one week will be drafting the story telling in one class then, recording the story in another room the following week?

Mr. Menz : So that each content area leads a part of the project.

Dr. Garett: Yes, you focus on identity as a place for students to explore who they are and…

Ms. Kurt: Are you the one who has the laptops? Do we have the kind of technology to do this? Do we have the actual number of laptops?

Mr. Menz: We have actually. Probably we have 24 laptops.

Dr. Garett began this segment by explaining the benefits of using digital story telling with students. She asked a question that positioned the university team as experts since the practices presented by the university team (curriculum mapping, digital storytelling, and cultural modeling) were part of their repertoire but not that of the classroom teachers. Then in line three, Ms. Kurt shifted the conversation, bringing the conversation closer to their expertise by drawing from the teachers understanding of

school resources and arrangements. In this way, the teachers contested the beat of the dance by shifting the discourse to their own expertise. After this shift in topic, teacher participation in the discussion increased. For instance, Mr. Menz entered the discussion since he knew about availability and access to laptops. For a time, the dance lead was in the hands of the teachers. Then in line 12, Dr. Garett moved to refocus the discussion on digital storytelling and, in doing so, she foregrounds university expertise. This is countered by Mrs. Kurt's question to Mr. Menz about the situation of the laptops. The interaction about distributing students and the laptops lasted several minutes until Dr. Garett redirected the conversation to digital storytelling.

As the topic shifts from conceptualizing the project to its planning and enactment, the lead continues to shift back and forth in rigid adherence to whose knowledge base is being tapped. This pattern of interactions occurred 15 times across the videos, and 13 of these times occurred in the first three meetings. These interactions can be seen as efforts from the middle school team to sustain the boundaries and to claim authority and an institutional identity that positioned them as experts. As the university team used the tools they brought to the inquiry group to lead the dance, the middle school team contested such choreography, at least for movements. This pattern of interactions decreased over time and a more fluid dance began to emerge in the last three meetings.

Moving towards a fluid dance: Crossing boundaries and expanding the object of the activity

As the teachers began incorporating their own tools (in the form of state standards, daily logistics, and firsthand knowledge of the students) and as they began learning and appropriating the university team's tools (in the form of the curriculum mapping and cultural modeling) participation began shifting. The division of labor of the meeting changed as teachers took charge and helped each other and the doctoral students to build and expand their understanding of the two-week unit (i.e., object of their joint activity). In other words, they began to dance to the same beat which they had constructed together. This joint dance occurred as (a) the situated identities of the participants of both teams became more fluid and (b) as tools from both teams were merged to design the two-week unit.

Learning across boundaries through identity moves

By identity moves we refer to participant's identity shifts. That is the point at which participants used the tools of other team members to move from their static institutional and professional identities towards new forms of situated being. These fluid identities were intentional moves to cross institutional boundaries and break conceptual tools. Although the research team generally led with their institution identities, they also had previous teaching identities. Two of the research assistants claimed those identities throughout the project while other members of the research team down played their teacher identities. Ms. Warner and Ms. Lint were research assistants, but they used their backgrounds as teachers to enact fluid identities when they needed to claim more authority. In the following excerpts, Ms. Warner and Ms. Lint create empathy with the teachers and claim authority by enacting identities that temporarily position them as teachers.

> *Ms. Warner*: It's nice to hear some of your concerns because in my fifteen years of practice I had some of those concerns too. So, [Ms. Carter] my frustration was so high my first year teaching that I moved and went from Maryland back to Minnesota and I think I actually took a year off. But, one thing that my path has taught me, especially being at [the university] is that there's all these approaches you can use that you don't really learn as you're training to be a teacher that's available to you.

Ms. Warner narrated her own teaching experience to claim a teacher identity. This gave her authority because she shared the experience of teaching with the classroom teachers. Ms. Warner sought to add to her credibility and therefore to the authority of her opinion by establishing the number of years of teaching experience she had. Ms. Lint's narrative followed immediately, positioning her authority by acknowledging what had been said as valid and then by describing a significant issue that often resonates with other teachers.

> *Ms. Lint*: Yeah, I've had some experience with what you're saying. You know we have all these tests. There's all this pressure on you and then you throw in the language issues, that's before the four hours [policy].

Ms. Warner and Ms. Lint continued these conversational moves throughout the six meetings to validate their participation and to claim additional authority. They moved fluidly back and forth between university and teacher identities depending on the conversation and the agenda they had for the conversation and its outcome.

Furthermore, although there were boundaries between professional identities and the tools they used for the group learning, professional identities did not automatically dictate who understood how to use certain tools. Ms. Lint and Ms. Warner, were new in their roles as research assistants and had recently come out of teaching professions. In the midst of their identity shifts from educators to research assistants they were in the process of learning the new theoretical ideas presented in the form of a tool someone else with more experience had created. This created tensions that became obvious in the final meeting. During this meeting between the teachers and researchers, Dr. Gravett was not present and Mr. Waltz was running late. As Ms. Lint and Ms. Warner were enacting their identities as research assistants by facilitating a meeting that intended to show the teachers how to identify their students' cultural models (Lee, 2007), tension in their shifting identities became apparent. Ms. Warner began the meeting by recapping what happened last time and Ms. Lint then introduced a cultural modeling tool, which was in the form of a single copy of PowerPoint pages. Ms. Lint flipped through the packet and described how Mr. Waltz used the notes from the last meeting to create the tool for that day.

> *Ms. Lint:* So now, what we're supposed to do is, if we came up with more from whatever else your students have done we can add to the list [that Mr. Waltz created on the tool] and we're supposed to come up with one.

At the start of this meeting, Ms. Lint's hesitance appeared through her use of "supposed to" as she introduced the tool and the learning goals. This hesitance is compounded when Ms. Tevez and Ms. Perez began sharing a series of reoccurring patterns they found in their students' writing and seek clarification on how to connect their tool (the student writing) with the researchers' tool (cultural modeling). They were relying on Ms. Lint and Ms. Warner to help them use these tools together. Rather than responding to the student writing excerpts that Ms. Tevez and Perez shared, Ms. Lint responded:

> And the reason we sound kind of hesitant is, um, in all honesty, Ms. Kurt and I were looking at, first you need to decide how it's going to play out and Mr. Waltz had wanted to approach it more 'let's make sure we've got this cultural data set solid.' So without him here, I'm more willing to go with the how do we logistically do this?

At this point in the conversation Ms. Lint acknowledged that she was unsure of how to use the tool they brought to the meeting. Instead, she presented an alternate tool that shifted the focus of the group work to scheduling and technical decisions regarding the use of technology. With this shift in tools came a shift in authority; the teachers knew more about how to access and use technology in their own building.

This tension around the tools to be introduced and the move to an alternate discussion is important since it highlights the complexity of identities. Both research assistants had experience and identities as classroom teachers, were developing new identities as researchers, and were negotiating an identity in the particular contexts of the ongoing discussion with teachers. Toward the end, Ms. Lint moved from attempting to enact a researcher identity to enacting a more fluid identity of researcher, learner, and teacher (i.e., familiarity with the technical endeavors). This fluid identity also created more fluid boundaries where the researcher joined the teachers as a learner. This was evident when the other graduate student who had created the tool, Mr. Waltz, arrived and began explaining the tool. Ms. Lint moves fluidly between learning and teaching, stating: "So, I'm trying to play it down a little bit because I think I finally understand what you're trying to say."

The meetings became an increasingly open learning zone in which teachers and doctoral students mediated and expanded each other's understanding of the two-week unit (i.e., the object of their activity). A rigid dance marked by the beat of the university team and contested for moments by teachers' concerns about logistics became fluid. Teachers moved from peripheral to full participation as they were able to connect their expertise with the tools brought by the university to design and expand the groups' understanding of the two-week unit. We demonstrate next how this participation shift happened.

Connecting tools across boundaries and expanding the object of the activity

As tools were introduced, vocabulary parsed, and examples provided, both doctoral students and teachers began to collectively appropriate the tools presented by the university. There was an increase in teacher participation as measured by teachers' talk. The activities in which this occurred were marked by trying to make meaning, establish definitions, and demonstrate understanding. For instance, in the fourth meeting, the group was trying to come up with a common theme across content areas using the Susan Drake's (1994) model to unpack the curriculum and look at commonalities across academic standards. Throwing out ideas and seeking agreement among the entire group marked the conversations that occurred at this moment. The science teacher, Ms. Perez, began the process by choosing a science standard, which was "To identify different kinds of matter days on the following physical properties, state density properties boiling point solubility pH oxidation and corrosion." The group began to identify the theme of "Change and Becoming" as a response to this Science standard. Then, Mr. Menz chose a social science standard that could be connected to the selected science standard:

Mr. Menz: I have the standard. Describe how racism and intolerance contribute to the Holocaust.

Ms. Tevez: I think as far as change, something that I want to explore further is that we can look at how a political party or one-man was able to change the mindset of the people. The way people look at not only Jews.

Mr. Waltz: It was not just Jews but also gays and gypsies.

Ms. Lint: If you look at the "know" of the science standards: which was know the participants, the triggers, the beginning and the end result that all results in the Holocaust. You need to know the participant's like Hitler and the end result's like the Holocaust.

Ms. Tevez: And the change also in Jews I mean that is that famous saying "never again"? They changed as a group of people.

When the tools (i.e., curriculum mapping) brought by the university team capitalized on something that the teachers had familiarity, comfort or were concerned with, their participation increased and the boundaries between the institutions became more fluid and boundary crossing occurred. In the above quote, teachers and doctoral

students build upon each other's contributions to generate a common understanding of how the Holocaust was connected to a Science standard and to the elected theme of becoming. We noticed that in these moments, teachers discussed among themselves and with doctoral students rather than asking questions or directing their comments directly to the university members. Hierarchical relationships between teachers and university members were momentarily dismantled.

Furthermore, when it came the time to search in the data from students' journals to identify cultural data sets to connect with the overall theme of "becoming," teachers took charge of the conversation and decision-making.

> *Ms. Carter:* I have to admit when I start gathering data they run with the relationship theme. In fact, I have to take the notebooks out of their hands, because they could not stop writing about the people that were important in their lives. I mean, I decided to make them do a list one day and I almost regret it, because they kept writing all these people down and they wouldn't get to the writing piece. So I think relationships are huge for them.
>
> *Ms. Perez:* Yes, I think that works great with the 8th grade.
>
> *Ms. Carter:* Yes, and I think we also found that with the seventh grade. I think it can be a little difficult for them to pursue their own changes, because they're not used to reflecting about their lives in that way. I think if we give them that option they are going to run with it.
>
> *Ms. Tevez:* I think I am going to definitely stick with relationships. I think especially with seventh graders. I tried yesterday with the recreation theme, but I don't think is going to dig deeper like that relationship theme. I think the recreation will come out. I think for recreation means to have meaningful relationships. I really want them to dig deep into who they are.
>
> *Ms Kurt:* So, we are going to stick with relationships?

In this interaction, teachers built upon each other's talk and shared their knowledge about their students' preferences to identify cultural data sets based on students' out of school relationships. Doctoral students neither were consulted nor did they participate in this part of the discussion. They were peripheral participants, observing and trying to understand teachers' plan to bridge students' relationships to

content area standards. Even when tensions emerged, teachers were able to solve them with little participation of the university team. For instance, a step in the process of designing the unit that was difficult for both doctoral students and teachers was to create an activity that connected students' out of school relationships with the academic standards that were webbed through the theme of becoming. As the group grappled with this task the following interaction took place.

> *Ms. Tevez*: I don't want to be forced: "Ok. This is math." I am just going to relate to the theme.
>
> *Ms. Perez*: We are just trying to make the connections with the content area. They do not have to say it in the presentations but they should know all the connections with the content areas. They don't have to say this is science. Some of them may do it but we should not force it.
>
> *Mr. Waltz*: So you don't have in mind to for them to use content area knowledge?
>
> *Ms. Tevez*: Well, I think they will be using content area knowledge. I mean this idea of character change in the book, "Hey, that is related to me. I changed a lot." So they are still using the idea of character change and relating it to their lives. Or the idea of constant change in math. How are they [students] changing and how are their relationships with other changing them?
>
> *Ms. Perez*: I am thinking for them to connect at the end not actually in the storytelling but at the end writing a reflection about how their story relates to science. For my class, a reflection afterwards. For example, for 7th grade we are starting ecosystems, the individual population and their community. That very well can be connected with the story of themselves.

Ms Perez continued to explain how her students could connect their digital story telling about their relationships with their Science standard until Mr. Waltz asked the teachers a question.

> *Mr. Waltz*: What I am hearing is that each of you is going to do different story telling.
>
> [Silence and head nodding from Ms. Kurt].
>
> *Ms. Kurt*: I like that. What about for their writing wrap up they connect the digital storytelling to all content areas.

Ms. Perez: So at the beginning we are going to talk about how content area is related to their story telling, and at the end we are going to bring that closure back with the write up.

Teachers were hesitant to force students to connect their digital storytelling with content area standards in the storytelling itself as they wanted the digital story to be a space for students to explore how their relationships with others shaped who they were becoming. Their understanding emerged as each of them advanced solutions and shared their sense making about their understanding of how the two-week unit came together. Teachers were marking the beat while Mr. Waltz struggled following their steps. At several points in the interaction, he asked clarifying questions to understand how those connections happen in the two-week unit. First, Ms. Tevez explained what the teachers had in mind. Mr. Waltz truly did not understand how the teachers imagined solving the tension. He persisted with another question that was answered immediately by Ms. Kurt with silence and head nodding. The question was almost dismissed when Ms. Kurt moved the conversation back to Ms. Perez's proposed solution. Ms. Perez continued to explain how she imagined the convergence of students' relationships and academic content area. The final decision was to let students use storytelling to explore the role of relationships in their lives. Then, students were to produce a separate product connecting cross-content area knowledge grouped under the theme of becoming.

In summary, teachers moved from peripheral participation to full participation as they were able to fuse their own expertise with the tools brought by the university. Thus, they claimed authority to lead the unit design. Their institutional identities as teachers in Rosario Elementary become more fluid as they shifted from learners to designers. On the other hand, doctoral students changed their participation from full to peripheral. They became learners of their own tools. Boundaries became blurred as participants from both teams work jointly to expand their understanding of the object of their activity (i.e., a two-week unit).

Discussion

In our previous work (Authors and Colleagues, 2013, 2013a and 2013b) we have explained the significance of interprofessional and interdisciplinary work to address

complex and interacting forms of exclusion, and thus advance a robust inclusive education agenda. In this paper, we examined the work of an inquiry group engaging in that kind of work. We were interested in examining how their identities mediated their joint work and the kind of learning that occurred during their meetings. We used CHAT and the literature on boundary practices to theorize the participants' meetings as an activity system in which the tools and identities brought by each institution and participants overlapped, generating power struggles to claim authority and ownership of the project as well as to facilitate participants' learning.

We recognize that the narrative thread of this article describes only part of the larger project. We took this tact so that we could explore deeply how the working space was negotiated and continued to be negotiated through the planning process. Briefly, the work of the team took flight from here and produced deeply moving student products that reframed how teachers understood their students and how the researchers understood their roles in supporting and negotiating research and practice spaces. In this discussion, we focus on our findings around identities in boundary work and professional learning. While our findings about identity highlighted the power struggles that are rooted in the participants' institutional identities, our findings about professional learning highlighted how boundaries can be crossed and understandings can be expanded when professionals draw from and use each other's toolkits.

The meetings of the inquiry group resemble the moves of a couple learning to dance together. We demonstrated how during the first meetings rigid moves demarked expertise boundaries and contested whose knowledge should be valued and used. Participants claimed access and credibility within the inquiry group by drawing on the expertise and practices of their respective communities. Teachers tended to claim their content and institutional identities through their classroom assignments (e.g., I'm a science teacher) and their positions at Rosario Elementary. Dr. Gravett and the doctoral students also enacted their institutional identities by naming the university as their work site. They used the tools that they had brought to the meetings (i.e., content curriculum mapping, cultural modeling and digital storytelling) and meeting agendas that tightly resembled the teaching format of university classrooms. As the meetings transpired, the participants' identities gained fluidity. For instance, doctoral students in some moments

acted as university faculty, teaching teachers certain tools and being the expertise holders, while in other moments they claimed their past as teachers to create affinity and build trust with the teachers at Rosario. These discontinuities and ambiguities are common in the work of boundary workers as they connect and translate the tools, practices, and perspectives of different communities of practice (Akkerman & Bakker, 2011; Wenger, 1998; Williams, Corbin, & McNamara 2007).

Learning occurred when participants drew from each other's understandings and tools to expand the object of their joint activity (i.e., two-week unit). Edwards refer to this capacity as relational agency:

> Capacity to align one's thoughts and actions with those of others to interpret aspects of one's world and to act on and respond to those interpretations. In CHAT terms it is a capacity to work with others to expand the object that one is working on by bringing to bear the sense-making of others and to draw on the resources they offer when responding to that sense-making. (2005, p. 4)

Both doctoral students and teachers exercised relational agency as they drew from each other's perspectives and tools to build their collective understanding of the lesson. As Edwards and D'arcy pointed out, "By engaging with the dispositions of others within a ZPD [zone of proximal development], learners gain new insights into the phenomena they are tackling" (2007, p. 150). Using the fusion of cultural modeling, cross content curriculum mapping, and digital story, teachers were able to expand their understanding of the two-week unit beyond teaching standards to understand deeply who their students were. Using relational agency in joint activity to cross boundaries, participants were able to understand the two-week unit through the perspective of others, generating new insights into the phenomena they were tackling. This was facilitated by making explicit each other's' interpretations of the lesson. By the last meeting, teachers were able to generate links between what they knew (academic standards, school resources and arrangements) with the tools brought by the university team (e.g., cultural modeling, curriculum mapping, and cultural modeling) and act on this new understanding to take the lead in the meetings. As Edwards stated, "relational agency requires that practitioners are not only able to recognize and draw on the expertise that is distributed across local systems, but also to contribute to it" (2005, p. 41). Our findings, thus, emphasized

inquiry projects as open ended learning zones in which all participants seek and gave support in joint action, expanding the mutual understandings of the object (i.e., the two-week unit).

An implication of this work for engaging in inquiry work for inclusive education is that boundary practices need to be carefully designed so that the object of inquiry is negotiated and expanded. For instance, tools and heuristics to guide an inquiry group's meeting should aim at nurturing synergy among all forms of expertise involved in the project. These tools should be created and negotiated among team members so that ownership of the project is distributed among the participants. From this perspective, a question for inquiry groups and future research is "what tools facilitate relational agency?"

We return to Deppeler's and Ainscow's introduction of this special issue, emphasizing that achieving equity should be at the heart of school effectiveness. Inquiry projects for inclusive education should involve expanding collectively interpretations of the world, generating complex solutions that come from the crosspollination of disciplines and professionals' understandings and toolkits, and taking action accordingly to dismantle intersecting and complex forms of exclusion. . In CHAT terms, inquiry projects should be about the continuous resolution of contradictions that emerge from boundary work and the continuous expansion of the object of the inquiry project. The expansion of this object needs to be informed by a conceptualization of inclusive education that addresses issues of redistribution, representation and recognition (Fraser, 2008; Waitoller & Artiles, 2013). In our inquiry work, for instance, the joint teams of the university and middle grade teachers were committed to creating a two-week unit that will provided access to academic standards for all 7^{th} and 8^{th} graders while valuing and respecting their cultural identities and providing them with a space to make a political claim about who they were and the social issues affecting their lives.

Relational agency is a prerequisite for the joint work of parents and professionals from various fields, institutions, and disciplines, who aim to dismantle intersecting forms of exclusion based on the misdistribution of social goods, the misrepresentation of undervalued student identities, and the misrepresentation of certain groups in key decision making instances. Our findings begin to pinpoint that engaging in this complex

work means not only learning new tools but also means becoming someone else (at least momentarily). In this sense, inclusive education does not only encompass the transformation of practices, tools, and policies, but the transformation of oneself.

Table 1

List and Characteristics of the Participants of the Study

Name	Role	Gender	Race
Dr. Sanders	Principal	Female	African American
Ms. Palmer	Assistant Principal	Female	Latina
Ms. Kurt	Math teacher	Female	Caucasian
Ms. Tevez	Cross content teacher in bilingual classroom	Female	Latina
Ms. Carter	Literacy teacher	Female	African American
Ms. Perez	Interim Science teacher	Female	Latina
Mr. Menz	Social Studies	Male	Latino
Dr. Gravett	University professor	Female	Caucasian
Mr. Waltz	Doctoral student	Male	Latino
Ms. Warner	Doctoral Student	Female	African American
Ms. Lint	Doctoral student	Female	Caucasian

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