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## Bridging the university-school divide - Horizontal expertise and the "two-worlds pitfall"

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## ABSTRACT

Research on teacher learning consistently documents the disjuncture between the practices beginning teachers encounter in university teacher preparation courses and those they (re)encounter in the K-12 classrooms in which they learn to teach. As pre-service teachers enter teaching, they gravitate towards conventional K-12 practices, dismissing those endorsed by the university as impractical. In this article, we delineate the concept of horizontal expertise and document how its production and use can address this “two-worlds pitfall.” Drawing on our work creating a cross-institutional collaborative, we identify three processes central to the production of horizontal expertise in teacher education: *the exchange of tools*, *the negotiation of social languages*, and *argumentation*. We then trace its use across the university and school settings to show how horizontal expertise can re-script mentoring and expand dialogic practices in the university. We conclude by identifying the challenges of developing horizontal expertise in teacher education.

### **Horizontal Expertise and the “Two-Worlds Pitfall”**

Research on learning to teach consistently documents the disjuncture between the practices that beginning teachers encounter in their university teacher preparation courses and those they (re)encounter in the K-12 classrooms in which they learn to teach. This “two-worlds pitfall” (Feiman-Nemser & Buchmann, 1985) is typically characterized as a conflict between constructivist practices endorsed by the university and transmissive instruction prevalent in K-12 classrooms. As pre-service teachers navigate the university and school settings and enter into teaching, they gravitate toward the practices and values of K-12 classrooms, dismissing those promoted by the university as “too theoretical.”

Our purpose in this article is to delineate the concept of *horizontal expertise* and to illustrate how its creation can address teacher education’s “two worlds pitfall.” We draw the concept from theoretical and empirical literature in activity theory. A growing number of studies on teacher learning employ an activity theory perspective. Studies in teacher education illuminate how differences in values, identities and tools available in university and school settings make it difficult for beginning teachers to transport theories and practices they encounter in the university into the school setting (Grossman, Smagorinsky & Valencia, 1999; Smagorinsky, et al, 2004; Smagorinsky, Cook & Jackson, 2004). Studies of professional development and instructional reform, in contrast, highlight the salience of boundary crossing to teacher learning. They document the learning that occurs through teachers’ interactions with colleagues across formal and informal organizational groups (Borko, 2004; Cobb, McClain, Lamberg, & Dean, 2003; Spillane, 1999). The concept of horizontal expertise extends current research by delineating the processes through which collaboration between teacher educators and

K-12 teachers can bridge the university/school divide and contribute to beginning teacher learning.

Engeström and his colleagues developed the concept of horizontal expertise through their work in multi-organizational terrains, including healthcare networks and manufacturing partnerships, in which coordinating work across diverse settings is necessary but difficult (Engeström, 2003; Engeström, Engeström & Karkkainen, 1995; Keruso & Engeström, 2003). Professionals in multi-organizational terrains share common goals, such as improved patient health or the success of new products, but work in settings that afford and demand different, often conflicting cognitive tools, rules and patterns of interaction. Achieving common goals requires professionals to cross organizational boundaries and combine the tools, rules and patterns of interaction from their respective settings into new, hybrid solutions. Horizontal expertise emerges from these boundary crossings as professionals from different domains enrich and expand their practices through working together to re-organize relations and coordinate practices.

Horizontal expertise differs from conventional notions of expertise that emphasize the development of established competencies within a particular domain. It emphasizes, instead, the commitment and capacity to move between activity contexts and to engage in the collaborative exchange and (re)mixing of domain-specific expertise. Engeström (2003) characterizes this as a “stepwise, two-dimensional process of negotiation and hybridization” (p.3), in which the first step typically involves professionals examining authoritative, or “scientific” concepts in light of the situated articulations of everyday experiences available in their respective work settings. This step is vertical; “scientific” concepts move downward while everyday concepts move upwards. The next steps are “horizontal.” Professionals collaboratively construct hybrid concepts and

embed them in jointly created tools. Further negotiations follow as professionals encounter the challenges that arise as they use these new concepts and tools in their work settings.

Boundary objects are essential to the production of horizontal expertise. Boundary objects are material resources, such as patient care plans or, in the case of schools, curricular standards, that reify lived experiences, practices and thought, freezing them into representations (Wenger, 1998). Though they cannot capture the richness of embodied practice, they serve as focal points around which connections can be made across settings and with which people can organize their work within their respective settings (Bowker & Star, 1999; Cobb et al., 2003). To do this, they must be plastic enough to address the constraints and demands of local settings, yet structured enough to maintain some common identity. Rather than requiring consensus, Star and Geisimer (1989) argue that boundary objects can coordinate work even when they are used differently and have different meanings. Keruso and Engeström (2003) similarly document how resistance to boundary objects among some groups can contribute to horizontal expertise by prompting professionals to articulate and re-examine existing conceptions and practices.

Though studies, such as Cobb et al. (2003), document how pre-existing boundary objects, like district pacing guides, can coordinate teaching practices across schools, in our work, we emphasize the importance of the co-creation of boundary objects by teachers and teacher educators. Co-creating boundary objects—rather than using existing ones—facilitates the types of mutual engagement, negotiations and hybridizations that characterize and generate horizontal expertise. Our work further documents the affiliative power of boundary objects and their salience to the development of horizontal expertise in teacher education. Suchman (2005) argues that the creation and use of objects are intimately bound up with the dynamics of association and disassociation. Professionals use (or refuse) objects to constitute identities and position themselves with or against other groups. The affiliative power of boundary objects is especially

potent. As reifications, they embody particular conceptions of “good” practice and, by extension, “good” practitioners. This can privilege some groups and marginalize others. Boundary objects thus serve as resources for aligning identities and establishing relations of power, as well as for coordinating work. Attending to this affiliative power elucidates the fault lines that can emerge in and challenge efforts to work across the school/university divide.

The concept of horizontal expertise is particularly timely. The past two decades have witnessed an expansion of field experiences in teacher preparation and the emergence of organizational forms, like Professional Development Schools and teacher research networks, that foster collaboration between university teacher educators and K-12 teachers. Policymakers have recently called upon teacher educators to form partnerships with their colleagues in the disciplines. Though driven by different goals, such efforts require teacher educators to re-envision the institutional boundaries that mark teacher education’s multi-organizational terrain as potential resources for organizational learning and innovation. Horizontal expertise provides a useful heuristic for thinking about, engaging in and examining such efforts.

In what follows, we illuminate the processes through which horizontal expertise can be produced for teacher education by drawing on our efforts as university teacher educators to work with K-12 colleagues in a cross-institutional collaborative herein called “the Network.” In particular, we illustrate how Network members’ co-creation of a boundary object facilitated the production of horizontal expertise.

We co-founded the Network with several classroom teachers who mentored pre-service teachers in SU’s<sup>1</sup> secondary English teacher preparation program. The program culminates in a nine-month student teaching practicum, or internship, during which teaching interns spend most of their time learning to teach in their mentors’ classrooms, returning to the university once a

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<sup>1</sup> Names of programs and people are pseudonyms.

week to attend methods and professional roles courses. The Network emerged from our conversations with mentor teachers about assignments we required interns in our methods courses to enact in their field placements. Many mentors felt the assignments disrupted their curriculum and endorsed practices counter to their own. For our part, we viewed the mentors as limiting interns' learning-to-teach opportunities and promoting ineffective practices. Working initially with ten mentors from several schools and districts, we convened the Network in 2001, in an effort to address these frustrations.

Between 2001 and 2005, the Network met monthly throughout the academic year to read and discuss research and professional literature in English education, share and examine artifacts from our teaching and work with interns, and develop shared tools to use with interns in our respective classrooms. Meetings were open to all mentors and university instructors involved in the secondary English program and typically took place at a community organization that provided us free space; the Network was, thus, outside both school and university settings. Funding from a state grant supported our time in the Network and covered substitute pay for teachers to attend meetings. While participation at meetings varied from seven to thirty attendees, fifteen mentors and university instructors attended regularly and constituted the Network's core membership. This group determined the overall goals and yearly agendas, though we typically established specific meeting agendas.

During initial Network meetings, participants examined existing boundary objects that shaped our work, including national, state and local teaching and learning standards. From this, participants decided to concentrate on creating new tools and boundary objects to assist interns' development of two core practices in teaching English - leading literature-based discussions and teaching writing. We focus, here, on the creation and use of a performance-based rubric aimed at helping interns build their discussion practices. The rubric classified various teaching practices

along a performance continuum that moved from “Does Not Meet Expectations” to “Exceeds Expectations” in three areas of facilitating discussions: 1) planning, preparation and implementation; 2) questions and responses; and 3) participation patterns. The rubric served as the focal point for the Network’s creation of other discussion-focused tools, including guides for mentoring conversations and university assignments.

Though the rubric was subject-specific, tracing its creation and use provides insights into the development of horizontal expertise in teacher education more generally. Assisting pre-service teachers’ development of discussion practices brings into sharp relief the problems of coordination in teacher education. Discussions depend on and are vulnerable to the contingencies of social interaction. Other practices, like teaching writing, can unfold over several activities and produce multiple artifacts, affording time for the reflection on and modification of practice that can occur at the university. Discussion, as a deeply embodied and situated practice, is more difficult to examine and modify in this way. Developing pre-service teachers’ discussion practices thus heightens teacher educators’ dependence on their school-based colleagues. At the same time, teacher educators and secondary teachers are likely to hold different conceptions of discussion. Research in English education distinguishes discussion from other types of classroom talk, documenting its benefits for student learning against the negative consequences of recitation. Secondary teachers, in contrast, often conflate discussion with recitation, and, while they devote significant time to recitation, they spend little class time on discussion. Efforts to coordinate the learning-to-teach opportunities necessary to develop beginning teachers’ discussion practices thus provide an ideal context in which to explore the potential and challenges of developing horizontal expertise in teacher education’s multi-organizational terrain.

We examine episodes from the Network’s creation of a boundary object, the rubric, to elucidate three processes central to the production of horizontal expertise in teacher education:



*the exchange of tools, the negotiation of social languages, and argumentation.* We then explore how this horizontal expertise influenced mentor teachers' and university instructors' work with teaching interns by tracing the rubric's movement across the school and university boundaries. Drawing on transcripts of mentoring conversations and of an SU methods class, we show how the rubric facilitated a re-scripting of mentoring and an expansion of dialogic practices in the university methods course to contribute, ultimately, to intern learning. We conclude by identifying several challenges to developing horizontal expertise in teacher education.

### **Methods**

The data we present comes from our on-going research on the Network. Between 2001 and 2005, we collected data from Network meetings, university methods courses, and school-based mentor/intern interactions to understand the processes through which university teacher educators can develop productive relationships with their K-12 colleagues. As Network members, we were participant-observers. This provided us access to the conversations as they occurred and insider knowledge of their intentions and goals (LeCompte & Preissle, 1993). It also posed challenges for building a comprehensive understanding of the Network. We addressed these challenges by triangulating multiple sources of data. This allowed us to cross-check interpretations and provided a rich array of information with which to substantiate our claims. We also used methods of discourse analysis to identify conflict and disruption as well as negotiation and collaboration.

#### *Data Sources*

This paper draws on several data sources, including artifacts, field notes and audio/videotapes of Network meetings, audiotapes of participant focus groups, and writings by Network participants directly related to the creation of the rubric. This includes 107 single-spaced pages of transcripts of audio/videotapes of two six-hour meetings in which participants

drafted and revised the rubric. We also collected audio and videotapes of mentor-intern conversations about discussion. We examine, here, the case of one mentor, Kelly. Based on our analysis of other mentor-intern conversations, Kelly's use of the rubric typifies how the teachers used it with their interns. Finally, we collected videotapes of university methods classes focused on discussions and interviews with interns selected to represent a range of field placements.

### *Data Analysis*

Analysis was multi-layered (author cite) and began with transcribing and cataloging tapes of Network meetings. We then indexed major occasions and transitions between them (Erickson & Shultz, 1981), chunking transcripts into episodes whose boundaries were marked by changes in goals, patterns of interactions, and/or tools. Initial runs through the data revealed themes and patterns related to the negotiation of discourse and pedagogy as we examined and created tools. We coded transcripts drawing on Engeström's work, ending with the following codes: sharing tools; negotiating languages; and negotiating competing visions of practice. We then coded transcripts of Kelly's mentoring conversations and the university methods course to identify references to the rubric and other Network tools, the use of words and phrases from these tools, and references to discussion practices. After reducing the transcript data, we examined the *texture* of the talk (Fairclough, 1995), studying topics addressed, words used, who used them and how they were used to manage social interaction. We focused on forms of involvement (Tannen, 1989), the distribution of speaking turns (Sacks, Schegloff, & Jefferson, 1974), the use of voicing and inter-turn repetition, and silences and interruptions.

### **The Production of Horizontal Expertise in the Network**

In the following, we examine how Network participants developed horizontal expertise as they co-created the rubric. Horizontal expertise emerges out of the processes of negotiation and hybridization. We trace these processes in the creation of the rubric, and further specify them by

highlighting the importance of the exchange of tools, the negotiation of social languages, and argumentation.

### **The Exchange of Tools**

Tools are key elements of activity systems. Communities of practice emerge, in part, as individuals build routine-practices and develop shared ways of reasoning through tool use (Wenger, 1998). Beginning teachers develop their practice by appropriating the tools available in the settings in which they learn to teach (Grossman, Smagorinsky, & Valencia, 1999). The development of horizontal expertise, in contrast, occurs primarily through the creation of new, hybrid tools, though the exchange of pre-existing tools across settings is essential to this process. Network participants shared several tools from their respective workplaces as they co-created the rubric. Secondary teachers brought student participation sheets and discussion guides from their classrooms, such as the “rubric for civil discourse” cited below, while we brought readings and observation tools from ours. The following excerpt illustrates how this exchange of tools initiated a hybrid conceptualization of discussion.

The first excerpt occurred as Network participants examined a video of an intern, Jackie, leading a discussion. Jackie created the video for an assignment in the first author’s methods course. It thus represented a tool that the first author brought to the Network from her classroom. Prior to showing the video, the first author asked Tracey, Jackie’s mentor, to share her knowledge of the discussion led in her classroom. Tracey responded:

**Tracey:** [Our school has] a rubric for civil discourse that is used in all disciplines. We have been working on that in our class since the beginning, about piggybacking, and replying back to other people’s ideas and understanding different perspectives...I had been working with Jackie on how to lead discussions so it wasn’t just teacher led...we also talked about how a discussion is not all responses, that discussions are also

[students] ask questions to people... Sometimes she thought she was having a really good discussion because all the questions she asked got answered. But what it was was Jackie-student-Jackie-student-Jackie-student. And so I sat down and transcribed so that she could see the pattern, and so, this isn't the pattern of a discussion.

**FA:** ... that's good, because we [methods instructors] wanted to reinforce the idea that discussions are different than recitations. Recitations, the pattern, teacher-student-teacher-student-teacher-student, and also the teacher is always initiating the discussion questions and then evaluating the students' responses. So, that's what they call an I-R-E pattern... our criteria for a discussion are that the interns have authentic questions that don't have simple one or two-word answers. And that they also use what they call uptake, and that means that they elaborate on students' responses and they facilitate it so that students elaborate on each other's responses...<sup>2</sup>

The first author's introduction of Jackie's video into the Network prompted Tracy to introduce a discussion tool from her school, the civil discourse rubric, which teachers and students in her school used to help students develop discussion skills. Tracey distributed this tool at the next Network meeting. Several mentors subsequently used it with their interns and secondary students. Most importantly, the exchange of tools enabled Network participants to place everyday and "scientific" conceptions of discussions in dialogue. As Tracey described the civil discourse rubric, she articulated an everyday, situated concept of discussion, using words like "piggy-backing" and "Jackie-student-Jackie-student-Jackie-student." The first author responded by articulating a "scientific" conception. She used terms, such as "recitation," "IRE patterns," "authentic questions," and "up-take," drawn from research. The exchange of tools thus initiated

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<sup>2</sup> The first author's discussion terms come primarily from Nystrand's (1997) research on dialogic literature discussions and Cazden's (2001) research on classroom discourse.

the vertical movement of everyday and “scientific” conceptions of discussions towards one another, a key step in the production of horizontal expertise.

The following indicators from the first draft of the rubric reveal how this dialogue ultimately contributed to a hybrid conception of discussion:

<b>Does not Meet Expectations</b>	<b>Approaches Expectations</b>	<b>Meets Expectations</b>	<b>Exceeds Expectations</b>
<i>Teacher initiates</i> conversations and asks questions; format typically follows <i>IRE pattern</i> (teacher initiates, student responds, teacher evaluates).	Students sometimes initiate conversations, usually at teacher invitation.	<i>Students initiate</i> some parts of conversation on their own.	Students take primary responsibility for leading discussion.
Students never respond to each other.	Students sometimes respond to each other's contributions.	Students build and <i>elaborate</i> on each other's contributions.	Student questions <i>respond to</i> and build on contributions of others, often leading to " <i>ah-hah</i> " moments for self or others.

The indicators embed a research-based conception of discussion articulated by the first author. The term “IRE pattern” appears, as does a reference to “up-take” in the second indicator under “Meets Expectations” that closely follows the first author’s elaboration of it cited above. Significantly, in the second indicator under “Exceeds Expectations” this “scientific” conception gets combined with an everyday conception. The notion of “up-take,” students responding to and building on each other’s contributions, gets merged with the idea of an “ah-hah moment.”

### **Negotiating the Social Languages of Practice**

Constructing this hybrid conception of discussion entailed negotiating our different social languages. Bakhtin (1984) refers to social languages as verbal-ideological systems that provide people “forms of conceptualizing the world in words, specific world views, each characterized by its own objects, meanings and value” (p. 300). We see the negotiation of social languages in the exchange above. Tracey used the experiential, situated language of the school. The first author employed the abstract vocabulary associated with the university. The negotiation of these

social languages produced what we refer to as a “double-voicedness.” As the indicators show, the languages of the university and the school co-existed in the rubric, sometimes remaining distinct, other times combining with each other. This double-voicedness is essential to the creation of boundary objects in teacher education. Boundary objects, like the rubric, are objectified representations of teaching. They reify practices, values and ideas with the intention that teachers and university instructors will use them to enrich their practices in their respective settings. Both groups must see their practices and hear their languages in these representations if the tools are to be useful to them.

Though essential, this double-voicedness poses significant challenges. Honoring multiple social languages can inhibit conceptual clarity. For example, incorporating everyday terms, such as “ah-hah moments,” introduced some ambiguity. We found that when interns appropriated this term in their methods course, it contributed to rather than resolved their difficulties specifying discussion goals. Further, social languages are not just tools for getting things done. They are resources for the construction of professional identities. As such, they establish boundaries among and between professionals and other social groups. Efforts to negotiate the social languages that people bring to cross-institutional settings require navigating these boundaries and the tensions they produce. Such tensions emerged throughout the creation of the rubric, as seen in the following two examples.

During one episode, a teacher stated that discussion was a “basis for further assignments... to see where (students are) at so you know where you are going to go.” Linda, who co-founded the Network with us and taught the university methods course with the first author from 2000 to 2002, rephrased the teacher’s comment as “formative assessment.” The teacher responded, sarcastically, “That’s what I was going to say.” Other participants laughed, signaling their awareness of our different social languages and the boundaries they made visible.

In another episode where we worked on the rubric, the meeting began with some teachers arguing that the rubric was unrealistic. They characterized the practices in the “Exceeds Expectations” column as “in the clouds” and out of touch with the complexities of enacting discussions in “real” classrooms. One teacher compared the rubric to documents produced by the state’s educational agency, documents the teachers viewed with dispersion. The teachers, thus, distanced themselves from the rubric, positioning it as a university tool even though they had been involved in creating it. Participants resolved these tensions in several ways. We acknowledged the teachers’ concerns and invited them to revise the rubric. In the revision, several “scientific” terms, including “uptake,” “wait time” and “probing,” were moved from the rubric’s main text to a footnote, subordinating our language. Several teachers, most of whom were core Network members, responded to their colleague’s criticisms by suggesting multiple ways to use the rubric, including exploring meanings that they and their interns ascribed to various terms rather than accepting the rubric as authoritative. The tensions were, therefore, ultimately productive; they prompted participants to expand the rubric’s usefulness and enrich its view of teaching. The teachers’ positioning of the rubric as a university document, however, points to the processes of disaffiliation that can arise in cross-institutional efforts.

### **Argumentation**

Along with the exchange of tools and the negotiation of social languages, argumentation around the developing boundary object was critical to the development of horizontal expertise. Argumentation took two forms in our work: the articulation of competing views about the purpose of discussions, and questioning the rubric to refine its conception of discussion. These processes were central to collaborative concept formation in the Network, and, we argue, would be productive in cross-institutional work in teacher education more broadly.



*Negotiating the Purposes of Discussion*

We began our work on the rubric by brainstorming the purposes of discussions. Participants produced a list that included: checking for students' (mis)understanding of basic information and stylistic devices; sharing information about students' cultures; building relationships; "get(ting) some students to talk," and exploring different perspectives. At the start of our work, Network participants used the term "discussion" to refer to disparate types of classroom talk and purposes. Rather than conceptualizing discussion, this list represents what Smagorinsky, Cook, and Jackson (2004) call a complex, a set of very loosely and often dissimilarly associated elements. As participants created the rubric and engaged in joint analyses of artifacts and professional readings, they began to refine their ideas about discussion and to formulate a joint conception of it. Debating competing views of the purposes of discussion was central to this process.

As participants analyzed Jackie's video, some argued that Jackie's discussion lacked focus. Linda, for example, contended, "I couldn't figure out where the discussion was going, what Jackie (the intern) wanted to get them to." Such statements implied a view of purpose as largely teacher determined. Edwina, a secondary teacher, challenged this view to assert a student-centered perspective:

**Edwina:** There's sometimes that she went back to purpose certainly, but I really liked it when she bounced off them [the students]... I like that instead of just going with her agenda she listened to what they kept saying, and she addressed it instead of just going back to her set questions... she didn't pick up into teacher talk, she just stepped back.

Throughout the remainder of the meeting, talk about the purpose of discussion moved between these teacher-directed and student-directed poles. Rubric indicators that Network participants created in small groups reflected this debate. One group took up a teacher-centered position,

identifying the teacher “mak(ing) a variety of concrete connections between the discussion and the rest of the unit,” as a component of acceptable practice. A second group emphasized responsiveness to student interests and ideas, asserting that “questions should be important to students” and that interns needed to understand the value of diverging from their lesson plans. The groups, thus, voiced the opposing views circulating in the Network. Significantly, a third group attempted to synthesize these views, proposing the hybrid notion of “a purposeful, student-directed discussion.”

### *Speaking back to the Rubric*

Navigating these competing views ultimately initiated the joint construction of a dialogic conception of discussion. Revising the rubric was critical to this construction. It enabled a type of argumentation in which participants spoke back to the rubric. This process was exemplified in the revisions of the following indicator for *discussion questions* undertaken by a small group comprised of Linda, a university instructor, and Beth, Kelly, and Ellen, all mentor teachers.

Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
Discussion Q's* are only textual.	Discussion Q's are mainly textual, with some focus on students' connection to text.	Discussion Q's are both textual and student-centered, with a clear tie to purpose.	Discussion Q's are both textual and student-centered, with clear connections between them and to lesson purposes.

\* Q's = questions

Linda initiated the revision process by objecting to what she viewed as the indicator's support of an overly simplified reader response theory:

**Linda:** ...this is interesting because we talked about this before, how some interns never get past reader response, you know, 'I liked it.' But they don't get

to the elements that the author uses to create those responses...are we saying that clearly enough in #2 do you think?

**Beth:** Well, I'm not sure...the rubric suggests that [having] the students make connections to the text [is the target].

Linda questioned whether the *discussion questions* indicator challenged the interns' tendency to valorize students' initial responses to literary texts at the expense of engaging them in analysis and critique. Beth interpreted the rubric as positioning student responses as central goals. As the group continued to critique the indicator, they challenged the centrality of this goal and began to grapple with what constituted the fundamental purposes of reading and discussing literature:

**Beth:** What if they don't have a connection, personally, to a text?...

**Kelly:** Think about things that you read personally... I mean isn't that what reading is about, to experience things that we are *not* familiar with? So, I don't think that we always do [have a connection]...

**Linda:** I think that's one of the reasons we expanded the canon, too, is to get them beyond the world they live in into other worlds.

**Kelly:** But their world means their world.

**Linda:** But if we said other worlds, or other life views or something? Is there any place in here where we talk about the purpose of discussion is to comprehend other worlds or other people?...

**Kelly:** How about "With clear connections to the human experience and their purposes?"...

**Ellen:** (That) leaves you room. Sometimes you don't know where the discussion is going. And you're amazed that you get to this point that you didn't even plan on getting to.

Bakhtin (1984) argues that understanding literature requires readers to navigate the social worlds such texts construct. This process is dialogic as it involves readers in understanding their own perspectives through “renting” the multiple perspectives that co-exist within literary texts. As Network participants revised the rubric, they moved towards this dialogic perspective, emphasizing the importance of engaging students beyond personal connections and towards exploring multiple “life views.” The construction of this dialogic conception re-shaped the group’s thinking about the meaning of “focus” and “purpose” for literature discussions. Group members moved from an initial concern about teacher focus to a view of discussion as co-constructed by the teacher and students. Arguing first with each other and then with the rubric enabled participants to refine, jointly, their understandings of discussion.

### **Horizontal Expertise in the School and University**

We now examine how the rubric moved across the school and university settings in order to document how the production of horizontal expertise in the Network, as embodied in the rubric, shaped the work of teacher education across these settings. We first explore how a teacher, Kelly, used the rubric with her intern, Steve. Kelly’s case illustrates how participation in creating and using the rubric re-scripted her mentoring. We then look into a university methods course to document how the rubric facilitated the interns’ interrogation of their own and others’ discussion practices.

### **Re-scripting Mentoring**

Prior to the Network many teachers expressed frustration with the lack of support they received to develop their mentoring practices. Lacking preparation for their roles as mentors, the teachers adopted a “How do you think it went?” mentoring script that, though intended to promote intern reflection, lacked depth. Teachers who piloted the rubric reported that it enriched their mentoring. Donald noted,

...[mentoring] discussions in the past were usually, ‘Well, what’d you think? How did it go? What were some problems? What were you happy with? And what can you do better next time?’...[with the rubric] my discussion was much more in depth than it would have been otherwise.

We see this re-scripting occurring in Kelly’s work with her intern, Steve. Kelly’s participation in creating the rubric expanded her mentoring repertoire and deepened her conversations with Steve. Kelly described how she used the rubric with Steve:

My intern and I used the rubric as a tool for planning, teaching, implementing, and assessing discussion in the classroom. We began by talking about our views of discussion. What did each of us think that meant for the classroom? We talked about how our ideas overlapped and where they diverged. As a planning tool, we read through the rubric and talked about each of the specific focus areas and how we might apply them to our lessons.

The rubric served several purposes for Kelly and Steve. They used it to identify crucial questions: how do we prepare students for the discussion? What is the role of the intern [teacher] in the discussion? How do we get all students involved in the discussion? These questions then structured and focused their planning and pre-observation talk about Steve’s discussions.

Involvement in creating the rubric also led Kelly to take a new role when observing Steve’s discussion. Instead of simply listening or observing myriad events, Kelly tracked student participation, a strategy Network members discussed and used to develop the rubric. In their post-observation conversation, Kelly’s charting enabled Steve to see how few students actually participated in his discussion. From there, Kelly and Steve brainstormed how to encourage more student-to-student interaction and discussion.

**Kelly:** Tell me how comfortable you felt with this discussion and tell me where you

were heading with it.

**Steve:** I was really comfortable with them but I felt I was guiding them rather than them actually having a discussion. I was more or less asking them questions and they weren't really replying to each other; they were replying to me...I'm not sure if they know how to piggyback off each other or if they understand why it is helpful to summarize what someone has said...There were a handful of shy kids which I'm going to have to work with.

From this brief excerpt we see Steve appropriating the rubric and other tools that Kelly brought from the Network to evaluate his own teaching. Steve employed words and concepts from these tools, thus entering into the conversations about discussion that Network participants had engaged as they created the rubric. Steve questioned if his discussion was too teacher-centered and if it actually constituted a discussion. He also reflected on the nature of student and teacher interaction. Steve was concerned that his students had replied only to him rather than to each other and wondered if they knew how to “piggyback” off each other’s contributions, a term that came from the civil discourse rubric Tracy had shared in the Network and that Kelly had appropriated in her classroom. Finally, Steve identified a new learning goal—encouraging more students to participate. Throughout the remainder of this conversation, Kelly and Steve repeatedly referenced the rubric to explore different aspects of Steve’s teaching and to plan for the next discussion.

Kelly’s case highlights how horizontal expertise can transform mentoring. Co-creating the rubric gave Kelly insider knowledge of how to use the rubric and the conception of discussion it reified. It also provided her with other tools to expand her mentoring. Kelly enriched the rubric by combining it with these tools. Most importantly, this tool use prompted Steve’s learning, as evidenced by his recognition of the meaning that participation patterns held

for his students, his use of the language and concepts the tools made available, and his identification of a new learning-to-teach goal.

### **Enriching Conceptions of Discussion in the University Classroom**

The rubric also facilitated substantive conversations about discussions in the university methods course that interns enrolled in concurrent with their field placement. Like Kelly, Stacey, the instructor whose methods course we examine here, participated in creating the rubric and incorporated it into her teaching. She required interns to use the rubric to analyze videotapes of discussions they led in their field placements and presented in class. She also revised the existing curriculum to include an inquiry project about discussion that involved interns using the rubric to identify an inquiry focus. The rubric thus expanded Stacey's practices much as it had Kelly's. Further, interns used the rubric in Stacey's methods class to develop their understandings of discussion, arguing both with and against it.

#### *Arguing with the Rubric*

The following excerpt illustrates how the rubric mediated interns' thinking about discussions of literature and, in particular, the teacher's role in them. Prior to the excerpt, the interns had used the rubric to analyze a video of a student-led discussion. They had also read an article on "open discussions" that described how a teacher had completely removed herself from discussions. The teacher in the video had attempted to do the same. In the following, Stacey and three interns considered the video in relation to the rubric's criteria for teacher and student participation:

**Tony:** Her questions were very open, indicating that she was trying very hard to get students to ask their own questions.

**Debra:** But I don't think she should ever completely step out, because there were times when they were off on a tangent, and if she had just come back and asked how these things are connected, it would have brought the students right back to the focus objectives.

**Stacey:** In an open discussion, students would ideally ask each other those questions, which would bring them back on track.

**Debra:** ...under "Exceeds Expectations" it (the rubric) reads, "teacher and students respond to each others' responses," which means that a teacher would never completely step out of an open discussion. So I don't think to have an open discussion (the teacher) has to completely not be there. ...

**Melanie:** I just think that it is unrealistic for a teacher to step out and not be involved, even during an open discussion. For a teacher to step out is to say that they already know everything. And even in the rubric, teacher involvement is still a part of "Exceeds Expectations."

The rubric facilitated the interns' questioning of the idea of an "open" discussion and helped them refine their own ideas of what constituted a discussion. Debra and Melanie used the rubric to argue for an active teacher role and against what they viewed as the teacher's ineffective withdrawal in the videotaped discussion. They invoked the rubric to support their view that at least *some* participation by the teacher was necessary in discussion.

As they placed the rubric in dialogue with course materials, the interns engaged questions of the teacher's role in discussions. The interns repeatedly raised and returned to this question throughout the semester. Because discussions challenge conventional relationships between teachers and students, questions about the teacher's role in discussion are pressing for beginning teachers for whom establishing authority is a central task (Fuller, 1969). Significantly, using the



rubric expanded their concerns. It enabled the interns to connect questions about the teacher's role with questions of purpose and student learning. The interns, armed with the rubric, articulated the view that teachers had a responsibility to ensure discussions met some learning goal. Using the rubric led the interns to grapple with the questions of practice that the mentor teachers and university instructors encountered as they created the rubric. As the interns appropriated the rubric to interrogate and defend their conceptions of discussion, they thus entered into a conversation that stretched across the settings in which they were learning to teach.

### *Arguing Against the Rubric*

As a tool *for* argumentation, the rubric enabled interns to articulate their notions of the teacher's role in discussions and to complicate these notions in thoughtful ways. The rubric also served as an object *of* argumentation. Like Network members, the interns refined their conceptions of discussions by arguing against as well as with it. This line of argumentation emerged during Stacey's introduction of the rubric. Stacey introduced it on the second class of the semester when she directed the interns to use the rubric to develop their inquiry projects. Several interns whose mentors had participated in creating the rubric were already aware of it. One, Eliza, immediately challenged Stacey's characterization of the rubric as a learning tool:

**Eliza:** ...they're giving us a rubric for what they think is a good discussion, and I'm going to use it to guide my question, when truly, honestly, there are parts of it that I don't agree with. So how am I going to use it as a reference? I mean maybe there's parts of the rubric that I want to explore...their participation suggests that I should have this many students participating to be effective and I don't, I can't, I just.

**Andy:** I love that rubric! [Class laughs.]

Eliza distanced herself from the rubric much like some teachers had done in the Network. Her use of "they" and "their" positioned it as an externally imposed, authoritative text. Eliza further

contested its representation of discussion, implying that it was “idealistic,” as another intern later said.

Both Eliza’s response and the dialogue cited above illustrate how the interns’ response to and use of the rubric in the university methods course was bound up with the processes of affiliation and disaffiliation. As they moved towards becoming “secondary teachers” and away from being “university students,” the interns both distanced themselves from the practices the rubric reified by positioning the rubric as the long-arm of the university, and used it to defend their own conceptions of discussion. In both cases, the interns articulated their practices and conceptions. This led some, like Debra and Melanie, to refine their ideas, while it expanded others’ thinking about discussion. Steve noted in his interview, “In talking about the discussion rubric...I realized that there are many types of involvement for teachers.” Similarly, Jenny explained, “Things like the literature and rubric are important . . . (they) help you to think about what needs to be done in specific situations.” The rubric sparked dialogue about discussions in the university classroom that, though often charged with tension, were ultimately productive for many interns.

### **Conclusion**

We have delineated some components of the production of horizontal expertise in teacher education. By examining the co-creation of a boundary object by teacher educators and secondary teachers and tracing its use in the school and university classrooms, we have shown how horizontal expertise can coordinate the work of teacher education across its multi-organizational terrain. The rubric was both appropriated and resisted to expand mentoring and university instruction and to facilitate intern learning. We conclude by identifying some challenges of developing horizontal expertise in teacher education.

### **Authentic Participation**

The production of horizontal expertise depends on the authentic participation of both university teacher educators and K-12 teachers. The involvement of secondary teachers in creating the rubric led to their ownership not only of the tool itself, but also of the conceptions of discussion it embedded. This ownership led the teachers to use the rubric in ways that engaged their interns in substantive conversations about teaching. Yet, the centrality of participation to the value of boundary objects poses a challenge to their widespread use. It is difficult to replicate the sense of ownership among educators not involved in creating boundary objects. Though we have incorporated the rubric into university methods courses and have distributed it to all mentor teachers, we are uncertain of the value it holds for those university instructors and teachers who were not involved in its creation.

Boundary objects are abstract enough to be used across a range of contexts. At the same time, they must be socialized; they need to be used in a community of practitioners who are in conversation with each other about their purposes and uses. Such a community can enrich the objects by placing them in tandem with other tools and by re-negotiating their language and inflecting new meanings into them. The creation of the rubric fostered conversations about discussions that stretched across the school/university settings and that prompted Network participants and interns, alike, to examine and refine their understandings of discussions. These negotiations pushed our thinking about the purposes of discussion and encouraged many Network members to rethink their own discussion practices.

In short, the horizontal expertise that results from creating and using boundary objects cannot easily be passed onto people outside of the communities that produce them. Sustaining cross-institutional communities in teacher education, however, is often difficult given the conflicting and changing demands that universities and schools place upon teacher educators and

schoolteachers. Changes in participants' responsibilities, tenure demands, budget cuts and the intensification of test-based accountability in K-12 schools contributed to our disbanding the Network as a formal collaborative after four years. Whether boundary objects can maintain their value in the absence of such formal communities is a critical challenge for teacher educators.

### **Bridging and Creating Divides**

The Network and the creation of tools within it addressed an enduring challenge of teacher education – the university/school divide. Over time, the Network facilitated a cultural shift in our program. University faculty and secondary teachers began to view themselves as partners rather than competitors. This helped to resolve many frustrations and tensions that had existed prior to the Network. The bridges built across school and university educators, however, can create other divides. The creation of boundary objects entails the reification of practices, values and meanings. We have documented the processes of disaffiliation that such reifications can prompt. Teacher educators need to attend closely to how and when cross-institutional work leads to disaffiliation and its consequences for beginning teacher learning. This is particularly important in relation to pre-service teachers. The disaffiliation we documented here was especially evident among the interns, who we did not include in creating the rubric. The resistance that some interns expressed to the rubric points to the importance of finding ways to involve pre-service teachers in the development of horizontal expertise. We have illustrated how co-creating boundary objects, like the rubric, can facilitate communication and build connections between university instructors and K-12 teachers. Integrating pre—service teachers into such work has the potential to further reorganize teacher education, perhaps even more fundamentally.

Despite these challenges, we believe that efforts to develop horizontal expertise are critical to teacher education. Indeed, the challenges we identified stem from the very features that make this work such a valuable and educative form of teacher learning and program

development. Teacher educators are increasingly being called upon to improve the learning opportunities they provide beginning teachers. This necessitates re-envisioning teacher education's multi-organizational terrain as a source of not only beginning teacher learning but also of our own learning as teacher educators and the learning of our K-12 colleagues. Horizontal expertise provides a useful framework with which to think about, enact and examine how this learning can bridge the university and school divide.

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