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The teacher education conversation: A network of cooperating teachers

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This study investigated a professional learning community of cooperating teachers and university-based teacher educators. To examine our roles and perspectives as colleagues in teacher education, we drew on frameworks in teacher learning and complexity science. Monthly group meetings of this inquiry community were held over two school years in a suburban school district in British Columbia. Participants' current and prior experiences in the role of cooperating teacher provided rich topics for conversation. Our analysis illustrates how aspects of complexity thinking both enable and promote teacher learning, in this instance, the professional development of cooperating teachers. The study highlights (a) key tensions that allow for deeper exploration of issues, (b) the need for flexibility that is open to contingency, (c) the importance of reducing hierarchical structures to enable networks to develop, and (d) improvisation as a key ingredient for teacher learning.

Key words: cooperating teachers, teacher inquiry, professional learning, complex system, practicum

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Cette étude a porté sur une communauté d'apprentissage professionnelle réunissant des enseignants associés et des professeurs de pédagogie en poste dans une université. Pour analyser les rôles et les points de vue des uns et des autres en tant que collègues dans la formation à l'enseignement, le groupe a utilisé des cadres de référence dans les domaines de l'apprentissage chez les enseignants et de la théorie de la complexité. Les réunions mensuelles de cette communauté de chercheurs ont eu lieu durant deux ans dans une commission scolaire d'une banlieue en Colombie-Britannique. Les expériences actuelles et antérieures des participants dans leur rôle d'enseignant associé ont fourni un riche terreau pour leurs échanges. Cette analyse illustre comment des aspects de la théorie de la complexité ont favorisé l'apprentissage des enseignants – dans ce cas, le perfectionnement professionnel des enseignants associés. L'étude met en lumière (a) des tensions importantes qui méritent d'être explorées plus à fond, (b) la nécessité d'une certaine souplesse vis-à-vis des imprévus, (c) l'importance de réduire les structures hiérarchiques afin de permettre aux réseaux de se développer et (d) la place clé de l'improvisation dans l'apprentissage chez les enseignants.

Mots clés : enseignants associés, recherche sur les enseignants, perfectionnement professionnel, système complexe, stage

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Based on results from previous research with cooperating teachers in British Columbia, teachers called for a more substantive and sustained dialogue for their work with student teachers[1] (Clarke, 2001, 2006, 2007). In response to this call, we gathered school and university teacher educators into a dialogue group which we named *The Teacher Education Conversation*. As we entered into Conversation with one another, as we called our method, we were mindful of Gadamer's (1989) caution about the difference between a genuine conversation versus a contrived conversation:

We say that we 'conduct' a conversation, but the more genuine a conversation is, the less its conduct lies within the will of either partner. Thus a genuine conver-

[1] The term teacher candidate is used synonymously with student teachers throughout this article. The University of British Columbia officially uses the term teacher candidate; however, the cooperating teachers in this project often used the term student teacher when referring to their own mentees. We found that the teacher candidates frequently used the term student teacher, as does the literature that we cite.

> sation is never the one that we wanted to conduct. Rather, it is generally more correct to say that we fall into conversation, or even that we become involved in it. The way one word follows another, with the conversation taking its own twists and reaching its own conclusion, may well be conducted in some way, but the partners conversing are far less the leaders of it than the led. No one knows in advance what will 'come out' of a conversation. (p. 385)

Gadamer's rendering of a conversation moved us away from postulating *a priori* understandings or *a posteriori* consensus as goals of communicating. The call for a genuine conversation between the field and the academy, and the emergence of complexity science in educational research as an alternative way to think about 'collectives' was timely because both sought to challenge traditional notions of professional learning (Collins & Clarke, 2008; Nielsen & Triggs, 2007). From a complex systems perspective, a collective is an open-ended, diverse, and emergent phenomenon, attentive to a variety of futures through self-examination and reflection on current practices (Davis & Sumara, 2006). The teachers' call resonated with this perspective as they sought a more genuine and cooperative engagement (among themselves and with the academy) in how the practicum is conceived and practised.

In this article, we recount our experiences in supporting this particular direction and analyze the nature and substance of the Conversation as it unfolded in monthly meetings over the course of two school years, 2007-2008 to 2008-2009. The outcome of our research points to possibilities to show how a complexity thinking sensibility offers an alternative frame for authentically engaging with one another as a professional learning community in the service of teacher education. We are not arguing to abandon current professional development efforts for cooperating teachers, but rather point out that, when viewed from a complexity science sensibility, such efforts have greater potential if reframed in terms of dynamic systems (e.g., as collectives) and if key elements of those systems, some of which are explored below, are carefully attended to.

PERSPECTIVES ON TEACHER LEARNING IN PRACTICUM SETTINGS

Teaching as a professional practice is contested domain (Hargreaves, 2001) and teaching new teachers is likewise contested territory, often grounded in theory-practice debates (Britzman, 1992; Cochran-Smith & Fries, 2005). Teachers who serve the profession as cooperating teachers in practicum settings are often regarded as little more than ad-hoc overseers of the success (or otherwise) of teacher candidates' implementation of theory into practice (Clarke, 2007). Further, little specific attention is given to how cooperating teachers learn to become teacher educators (Murray & Male, 2005), despite Blocker and Swetnam's (1995) claim that "the cooperating teacher is the most influential component of the student teaching program" (p. 21). In our experience, both cooperating teachers and teacher candidates perceive the university/school interface as fragmented and disconnected as evident in tensions between, for example, course-specific and program-wide emphases; 'being a student' and 'becoming a teacher;' and, the role and status of school and field-based components (Clarke, 2001; Clarke & Collins, 2007).

Foundational to these tensions are the differing (and sometimes competing) value systems that university instructors and cooperating teachers hold and the inscribed institutional mandates under which they work. In the current study, cooperating teacher and university instructors/researchers gathered as *teacher educators* concerned about the possibility of reconnecting or renegotiating the very important relationship between schools and universities as interdependent contributors to student teacher learning. Further, following Grimmett and Erickson (1988) and Schön (1983), we argue that reciprocal engagement in a professional learning community offers the opportunity to collectively explore issues of personal and professional relevance.

Lave and Wenger's (1991) notion of community of practice became an important starting point for framing the Conversation and for analyzing engagement within the collective. As Wenger (1996) has noted, communities negotiate, through participation, a shared repertoire of routines and rules of conduct (and interpretations thereof), and renegotiate meaning through conversations about situated practice. As teacher education researchers, we were interested in exploring the emergence of a

community that engaged teachers in authentic conversation. Building on Lave and Wenger's (1991) work and following Latour (1993) and Nespor (1994), we regard a community of practice as a dynamic collective that seeks to maintain coherence while agents – people, ideas, and practices – continue to influence one another, continually responding to change or difference (Davis, 2007). This coherence means that a kind of fluidity and ambiguity occurs to the boundaries within and beyond the system because agents move in and out of it with relative ease and as need arises where the authoring/authority of people, ideas, and practices are a local phenomenon. The system remains open to influence from sources external to it yet stable enough to remain coherent and recognizable as a system with its own boundaries.

A dynamic system also responds to perturbations in the local environment, where enabling constraints – conditions that define a system but do not limit the possibilities within it – give both shape to and provide the generative potential for a system (Capra, 2002; Davis, Sumara & Luce-Kapler, 2008; Maturana & Varela, 1987). In such a system, no single or central authority exists, and so through interaction among the agents within the system, it self-organizes, building a network through interactional patterns and spaces. Agents within a dynamic system function on multiple levels of interaction and influence, just as levels of the system interact with and influence other levels. Hence, agents bump up against and influence one another and adjacent systems in a nested fashion (Davis & Sumara, 2006). Interactions among and between layers set up feedback loops that inform and regulate a system's activity. We sought to explore these features with the Conversation and by doing so to provide opportunity to specifically think differently about how the professional development of cooperating teachers might occur.

However, enabling conversations to explore important issues around a cooperating teacher's role within teacher education is challenging, given the often instrumental nature of professional development practices. From our experience such practices do not often include the opportunity for genuine conversations (Darling-Hammond, 1996; DuFour, Eaker & DuFour, 2004). Clarke's (2001) survey of British Columbia cooperating teachers, *The Voice of School Advisors* (VOSA), revealed teachers' strong call for a space to converse about their work as cooperating teachers in a

more substantive and sustained way, and also to better understand their advisory practices (Clarke, 2006, 2007) than allowed for under current practices. Recent literature on teacher professional development (Garet, Porter, Desimone, Birman, & Yoon, 2001; Penuel, Fishman, Yamaguchi, & Gallagher, 2007) also calls for alternative conceptions of teaching, learning, and schooling to counter traditional beliefs about pre- and in-service teacher education. Lieberman (1995) noted that "[t]he conventional view of staff development as a transferable package of knowledge to be distributed to teachers in bite-sized pieces needs radical rethinking" (p. 591). We believe that a complexity sensibility and its rendering of a learning community, as represented by the Conversation in the present study, are a possible response to these calls.

CONTEXT FOR THE *TEACHER EDUCATION CONVERSATION*

Trusting in the generativity of a collective enterprise, and given our belief in the emergence of a higher order of activity (Johnson, 2001), we arranged a monthly meeting time, space, and evening meal for the Conversation. In May 2007, we extended an invitation to cooperating teachers in a suburban Western Canadian school district. As part of the one-year, post-baccalaureate Bachelor of Education program at the University of British Columbia (UBC), cooperating teachers supervise teacher candidates during three practicum periods over the school year: "immersion days" once a week from early in the school year; a two-week practicum mid-way through the year; and, a 13-week "extended practicum" after the second university term. Teacher candidates are expected to gradually increase their planning and teaching responsibilities over the three practica periods so that by the midpoint of the 13-week extended practicum, they have assumed 80 per cent of the classroom teaching responsibilities. A UBC faculty member serves as a faculty advisor who makes regular classroom visits for observation and evaluation of teacher candidates. There are also other teacher education programs at UBC, and other models for the practicum experiences. Further, schools and teachers in the Lower Mainland area of British Columbia may sponsor teacher candidates from several local universities, and thus, cooperating teachers who were part of the current project may also have had teacher candidates from other local universities.

We gave the invitation to join the *Teacher Education Conversation* with the expectation that subsequent activities and inquiries would unfold from our initial interaction (i.e., there was no preset agenda). The local teacher association provided a meeting space for the Conversation. We asked those planning to attend to RSVP to give organizers an idea of the size of the group in advance. We indicated our commitment to work with the cooperating teachers in a continuous fashion for several years, but did not ask for a similar commitment from the cooperating teachers. Instead, we recognized and honoured other aspects of teachers' lives that might prevent their on-going attendance, for example, extra-curricula activities, professional development commitments, or graduate studies. Although we tried to avoid overlap with other activities as we collectively scheduled our first and subsequent gatherings, conflicts were impossible to avoid and meeting attendance was variable. The school district in which we held our Conversation encourages teachers to engage in personally-selected professional development activities throughout the year and supports these activities by advertising and circulating a Professional Development Program each year (a staffroom coffee table book) in which our Conversation was one of up to 60 different options for the teachers.

RESEARCH FOCUS AND METHODS

Drawing on Gadamer's (1989) notion of authentic conversation and Davis and Sumara's (2006) interpretation of complexity science in educational contexts, we focused the research of the current study on the nature and substance of the engagement between cooperating teachers and university instructors/researchers that the Conversation occasioned. Going into the Conversation, we believed that a learning community was a dynamic system where discussions could take many directions, some new, and many that were further iterations of previous directions. The results of our research proved our beliefs to be true.

Site

The school district in which we conducted the *Teacher Education Conversation* is located in the Lower Mainland of British Columbia, a large suburban district with 49 elementary and secondary schools, serving ap-

proximately 22,000 students, kindergarten to grade 12. The surrounding metropolitan area from which the district draws its students includes a growing population base of nearly 200,000 people. The area, mostly middle-to-upper class, includes a large percentage of immigrants to Canada.

Participants

Along with the four university instructors/researchers, between 6 and 21 teachers – a core group of teachers (an average of 12) – attended 19 monthly meetings over the course of two years. Meetings lasted for two hours after school from 3:30 to 5:30 p.m. Participating teachers ranged in age from 29 to 64 years who had 6 to 35 years of teaching experience across kindergarten to grade 12 settings. Several were or had been school administrators. Most had either earned a Master's degree or were currently enrolled in a graduate program.

Data Collection

We captured our explorations from each meeting on audio and video tape. Two of the four university participants kept detailed field notes, while all attended as participant-observers and respondents. A meeting summary is posted on the project website http://cust.educ.ubc.ca/vosa. We made detailed notes and interpretations of the meetings, made available to participants in the Conversation, and a few of our participating teachers took up the invitation to review our detailed notes. The research team held pre-briefing and post-briefing sessions for the meetings, and usually met at least once between meetings to review notes and other records to deepen our analysis of and heighten our sensitivity to the nature and substance of the Conversation as it evolved.

The Conversation opened with issues that teachers saw as relevant and pertinent to the practice of sponsoring teacher candidates during practicum. Subsequent conversations over the 2007-2008 and 2008-2009 school years explored ideas and issues first raised at the initial meeting as well as new or related issues that emerged. Our complexity science sensibility prompted us to pay attention to features of networks such as (a) how action is initiated and directed locally, (b) how feedback loops move information around a system, (c) how disequilibrium can have

generative outcomes, (d) how successive cycles are iteratively elaborated, (e) how layers of the system are nested, and (f) how a system and its agents – people, ideas, practices – seek coherence. We used these features as part of the analytic frame to identify key issues, themes, and trends in the data (Lincoln & Guba, 1985).

The rendering of the Conversation that follows represents key threads drawn from the "totality of experience" (Semetsky, 2005, p. 32). Our presentation of particular ways the Conversation opened itself to challenges and unsettling allows readers to appreciate the tentative and emergent nature of the community over the course of two years of our study and also to judge our attempts to attend to Gadamer's (1989) caution by refusing to impoverish "the diversity of possible meanings embedded in experience" (Semetsky, p. 33). We hope that this rendering is sufficient to invite readers into and vicariously experience the Conversation. As such, this study represents a case of teacher learning as a dynamic network.

ANALYSIS

Clarke, Erickson, Collins, and Phelan (2005) prompted us to invite chaos and trust complexity. Consequently, we recorded and revisited half-born thoughts and beginnings of ideas throughout the Conversation. Our purpose, among others, was to spend time identifying, inquiring into, and exploring issues, not to provide quick answers or closure. We believed that the Conversation self-organized as a learning community or network (Lieberman & McLaughlin, 1992) as teachers increasingly came to discuss and pursue issues of relevance to them rather than being led or directed in those discussions by the university instructors/researchers. We have organized our analysis below from a complexity perspective around five key aspects of the Conversation: self-organization, nestedness, disequilibrium, enabling constraints, and decentralized network.

Self-Organization

During the evolution of our community, we cycled through a range of issues that arose during the monthly meetings. In later sections of this article, we name and elaborate on a number of these issues to show how our collective explorations widened and deepened the cooperating

teachers' understandings of their work with teacher candidates. Our first three meetings encouraged participants to articulate the variety of ways in which they understood their work within teacher education. During the first meeting, we, as researchers, expressed our hopes that the Conversation would be a place to discuss issues, to undertake inquiries, and to allow professional development opportunities to emerge. We asked questions to prompt discussion, inviting teachers to share their interests in being part of the Conversation, their hopes for what the Conversation might do, and their understanding of the key issues facing cooperating teachers.

After the first meeting, the research team clustered and synthesized into three categories the issues that the participants raised:

(1) operational (Where do cooperating teachers turn for information?),
(2) professional (How do we know that we are doing the right thing I our advisory capacity?), and,
(3) programmatic (How does the school-based experience fit within the larger context of teacher education?).

We began the second meeting by asking, "If we were to put those three clusters of concerns into a box, what [other issues] would still remain outside?" Subsequent meetings involved elaboration, review, revision, and reflection of the totality of issues raised (some 200 in all). Each layer of conversation seems different, richer, deeper, prompting further engagement. Interim records for the project became traces of the "landscape of teacher education" (Clarke, 2001) that we were exploring together.

By the third meeting, we saw an evolutionary shift in the Conversation with regards to content, structure, and focus, a shift away from seeing the practicum as a fragmented and disconnected experience or a series of problems for someone else to solve. It moved toward the Conversation itself potentially being an interface in its own right, a place for the field and the academy to take up the issues collectively. The shift invited a new conception of professional engagement and knowledge generation, prompting the Conversation to become a place to explore these ideas. Although the concerns and issues captured in the three initial themes remained significant, participants focused more deeply on the complexities of what actually occurred in their work with teacher candi-

dates. The categories regarding their progress and how cooperating teachers know they are doing the right thing highlighted the importance of the relationship between teacher candidate and cooperating teacher. Perhaps most importantly, the group re-labeled the third of our original categories, operational concerns, as *co-operational concerns* (i.e., school *and* university), highlighting relationality as a central principle of the emerging community.

At the fourth meeting, which occurred in November 2007, our initial three-part categorization had grown to seven distinctly different categories, encompassing (a) the decision to become a cooperating teacher; (b) essential practicum tasks, duties, and responsibilities; (c) the relationship with teacher candidates; (d) criteria or benchmarks to judge or evaluate teacher candidates and how to present these clearly to them; (e) frequency with which one ought to be a cooperating teacher; (f) feedback to cooperating teachers; and, (g) linkages with other teachers, teacher candidates, and the system at large. The evening's discussion, which generated even more topics within those categories, began to articulate particularities within each topic.

Collectively, we began to imagine that the issues we were elaborating and particularizing through the Conversation might provide the basis for an inventory to characterize teachers' perspectives on their roles as cooperating teachers. At the same time, we did not want to close down discussion by imagining that we had a complete list of relevant issues. The group's list of topics grew to 98 items within the seven categories. To better gauge the importance (or otherwise) of these issues, the group at our next meeting placed the seven categories along with their subsidiary topics on large posters and hung them around the meeting room. The group then worked their way through the poster topics in pairs or small groups, discussing and then adding coloured dots to indicate whether a particular issue was important to them as individuals, to other teachers but not necessarily themselves, or not important at all (see Figure 1).

The teachers also edited the way the topics were phrased and recorded other topics or issues to the posters as add-ons or points of clarification. This process was highly engaging and generated lively micro-discussions around the room. A large roundtable discussion with the

Issues in Becoming a Cooperating Teacher

Selection, preparation and training of cooperating teachers.
Understanding the role of mentoring new teachers.
Clarifying my own beliefs on 'being a good teacher.'
How frequently one should serve as cooperating teacher.
Diversity of personalities and styles among cooperating teachers.
Differences in classroom structures and organization.
Lack of any 'standard model' of student supervision.
Supervisory responsibilities at the school-wide level.
Supervisory responsibilities at the district-wide level.

Note: For the items depicted, teachers were asked to comment on the issue as relevant personally, for others, or not an issue

Figure 1. Sample Poster Items Generated by Cooperating Teachers

whole group followed the poster activity and the pace of conversation quickened. As had become the pattern, the teachers responded to each other rather than directing their comments through the research team, and began doing so more readily. The outcome was the evolution of our initial three (and then seven) categories to ten categories (see Table 1).

From our perspective, the participants in the Conversation, who were engaging in a more authentic interaction with us and among themselves, developed in the process a newly-emerging collegiality; in short, self-organization was a clearly emergent phenomenon over the course of the meetings. At a subsequent meeting, each person ranked "the intensity of concern" about each topic on the posters. Because it became clear in the large group discussions that some participants were addressing individual concerns while others were voicing collective concerns, there was an interest to distill the difference between these classifications within the lists. During this exercise, Stephanie, a school administrator, raised a question that took the Conversation in an entirely new direction: *"Can we*

Table 1

Refined List of Ten Categories Within the *Teacher Education Conversation*

	Link to Original Three Categories		
Category	Operational	Professional	Programmatic
1. Uncertainty regarding what teacher candidates have learned in their (on-campus) education program.	X	X	
2. Desire for opportunities to meet prior to teaching, rather than after.		X	X
3. Information on selection, preparation and education of teacher candidates.	X		
4. Clarification regarding what cooperating teachers should expect from teacher candidates.	X		X
5. Time for initial meetings and ongoing discussions with teacher candidates.	X		
6. Time and opportunity for co-planning.		X	
7. Clarification regarding what teacher candidates should expect from cooperating teachers.	X		X
8. Lack of formal feedback mechanisms for cooperating teachers.			X
9. Lack of feedback to cooperating teachers from faculty advisors.			X
10. Lack of feedback to cooperating teachers from teacher candidates.			X

look at what could be? As opposed to here, with what 'is'?" Stephanie's insight captured a tendency that none of us had recognized up until that point: our dialogue described present practice whereas she wanted to generate new ways to think about and relate to people, ideas, and practices.

Prompts such as hers indicated further self-organization within the group and an awareness on the part of the teachers, consistent with Ellsworth's (1997) observation, that the teaching/learning relation is a paradox that calls for greater internal engagement and not, as is often the case, an external intervention. In sum, Stephanie's comment (and subsequently the group's re-direction) illustrated how problem solving can be resisted so that the group explored particulars of problem setting (Schön, 1983), allowing for an alternative way to conceive of the overall problem itself.

Nestedness

When participating teachers attempted to describe issues of significance for them in volunteering to sponsor teacher candidates, they began to ask questions such as, *"Is this the richest experience that we could offer our teacher candidates?"* (Tina, an elementary teacher). Opening discussions of the nature and substance of the practicum experience invited reflection about both personal and professional responsibilities that are manifest in the relationship between a cooperating teacher and a teacher candidate. Fred, a grade 6/7 teacher asked, *"How do duties and responsibilities and tasks of cooperating teachers evolve as the practicum experience moves forward?"* Collectively exploring such understandings revealed "commonplaces" (Fenstermacher, 1986; Schwab, 1973) and some inherent "wisdom of practice" (Shulman, 1987) previously unnamed by the group. Schwab's four commonplaces (i.e., learner, teacher, educational milieu, subject matter) are equally important elements that form the basis for teachers' "reasoned and reasonable judgments about teaching" (Clarke & Erickson, 2004, p. 206). While reflecting on the duties and responsibilities as a practicum sponsor, Dave, a secondary school vice principal, went further and challenged taken-for-granted assumptions about early practicum experiences:

Pre-service teachers are here for observing but they don't know what they are looking for or at. Cooperating teachers may not have the skill set to stand outside themselves and debrief [the student teacher on the moves he or she made while being observed by the student teacher]. Teacher candidates can't see the [internal] decisions made by the teacher.

The group's naming the issue that teacher candidates did not know what to observe when watching an experienced teacher in action revealed that cooperating teachers possibly may have neither the reflective capability nor language to explore their own underlying pedagogical reasoning with the teacher candidate. Consistent now with the growing willingness on the part of teachers in the group for all issues "to be on the table," Dave added, *"How do we get the teacher candidates into that [pedagogical] decision-making process?"* The Conversation explored the important tension of jumping between the various levels of being a teacher and a co-operating teacher and between the nature and substance of the practicum experience (as noted in the preceding paragraph) and the nature and substance of a cooperating teachers' professionalism. In other words, ambiguous boundaries occur around the roles, wherein responsibilities and relationalities are nested within the teaching-to-learn and the learning-to-teach contexts.

Another example of "level-jumping" that emerged repeatedly was the question of how to create a relational space that feels safe enough for both teacher candidate and cooperating teacher. Slick (1998) pointed out that the concept of attending to different layers of responsibility in developing relationships is a key element in the practicum experience. Lee, a grade 4/5 teacher, felt that he was always the one directing the talking: *"I ask a question, then the conversation goes in a particular way."* Lee's concern reflects a tension felt by the group: wanting open and reflective dialogue with their teacher candidates, yet noticing the challenge of doing this in a way that was safe for both parties.

Janet, an elementary school principal, also recognized the challenge of developing meaningful relationships and dialogue in practicum settings. Pointing to yet another layer, she noted that teacher candidates were often more willing to talk with each other than with their cooperating teachers: *"Sometimes when teacher candidates are in a group, they are more willing to share openly issues that are concerns for them."* In response, Tina, a grade-3 teacher, asked, *"If all of the pieces are kept apart, how does the*

conversation happen?" Both Janet and Tina touched on important issues that were reflected in our collective engagement with the teachers: the practicum happens on multiple layers, but also within layers. This understanding came through both reflection and exploration by the members of the group – young and old, novice and experienced, teachers and administrators – and indicates the often tacit (but unarticulated) nestedeness of the system where it exists only in relation to neighbouring layers, although each layer is distinct. Karen, a grade-2 teacher, further noted:

> *Sometimes our mindset is 'I have a teacher candidate; you don't have one this year, so I'm the cooperating teacher.' But, as a staff I think we need to look at it as a staff responsibility as well, not just that person being in my classroom . . . . Maybe you're partnering with me in my class but all the teachers share a role in that.*

Karen underscored the nestedness of the learning-to-teach context and the relationality that extends beyond more traditional notions of the practicum.

A further level to the practicum is the linkage between the field and the academy. Typically, virtually all involved experienced these two levels as solitudes. Exploring the practicum and its related issues in a sustained and substantive manner during the Conversation *together* was a turning point for those engaged as we collectively began to recognize and identify for all concerned an interdependence that is critical to the success (or otherwise) of the practicum, thus challenging what is often a point of disconnect or fragmentation in teacher education.

Disequilibrium

As we explored various issues during our monthly meetings, we noted points of disequilibrium or tension within the dialogues and topics we were considering. The teachers raised questions about advisors' background knowledge and qualifications for being a cooperating teacher or university supervisor. Teachers felt a tension between a desire for guidelines for mentoring and the need for flexibility and autonomy in responding to the learning needs of individual teacher candidates. John made the comparison with Pharmacy where trainee pharmacists are placed in the field with preceptors, the counterpart to cooperating teach-

ers in education. Typically, he noted, preceptors have a detailed handbook to prescribe the range of experiences for a trainee. John asked if there were something similar for cooperating teachers. The response was a unanimous, *"No."* Although some thought such a handbook might be useful (all cooperating teachers receive a copy of the *UBC Teacher Education Handbook*), Diane, who challenged the notion of detailed guidelines, suggested, *"If we did (and we don't), would it make it too rigid? The box could be too small. We want some guidance in terms of expectations."* Jane, a secondary art teacher, suggested that as an alternative, *"some of [our current practicum] 'checklists' or guidelines could be fattened up, perhaps out of our own experience in the subject areas or the context of the practicum; particularizing could be helpful."*

The group did not close upon a final decision, and the further discussion went, the more complex the issue became. For example, because there are no qualifications for becoming a cooperating teacher in British Columbia, discussions arose around teacher educator professional development for practicum settings. Curiously, the resistance to seeking stability (or the acceptance by the group of disequilibrium) on this issue was very generative in terms of deepening and extending the Conversation. Researchers in other contexts have noted the importance of enabling teachers to collectively explore their understandings as learners (e.g., Garet et al., 2001). Disequilibrium within the Conversation meant that cooperating teachers were discussing issues that went well beyond topics that might be found in more traditional professional development workshops or practicum advice. It became apparent that the Conversation fruitfully extended the notion of teacher learning to teacher inquiry around the concept of mentoring beginning teachers. Tina emphasized this point by noting that the Conversation had allowed her to realize that *"Being a cooperating teacher is the best professional development I've ever had."* The Conversation continued to evolve and chart new directions as the shift from 'student teacher learning' to 'cooperating teacher learning' became more prominent, never seeking closure, but rather, always a deliberately provocative stance that held all conclusions lightly and saw advantages in contributions that complicated, rather than simplified, taken-for-granted assumptions. Disequilibrium was not paralyzing in this instance, but productive!

Further, as cooperating teachers in the group explored their own understandings about being a mentor, they realized the ambiguity associated with that role. Combined with the lack of formalized guidelines or professional development opportunities, they began to question the assumption that being a classroom teacher is adequate preparation for becoming a teacher educator, an issue explored by Murray and Male (2005). Although cooperating teachers questioned the basis of the preparatory knowledge and abilities their pre-service teachers brought to the practicum setting, they began to question their own competencies and qualifications as those responsible for the future of the profession (Lave & Wenger, 1991). Again, highlighting and then exploring points of disequilibrium were thus generative in terms of teacher learning that was supported in the exchange environment of genuine dialogue within the Conversation.

Enabling Constraints

The Conversation raised questions regarding the practicum interface: its location(s), its duration, and what exactly happens within it. As the teachers did so, they sought to name constraints and enablers for them as educators of beginning teachers. As a result, the cooperating teachers began to explore the space of "becoming a teacher." For example, Dave asked:

> *How do we see this process? Teacher candidates will become a teacher in 13 weeks. On their first job, they are on their own. The idea is crazy that they will become a teacher in this time. What is reasonable to expect or accomplish in 13 weeks [the length of the current practicum]?*

Fred, reflecting on his own career, wondered when it clicked for him that he was a teacher: *"It takes awhile to take on the identity of 'teacher.' You have to do it for awhile before you can say, 'this is really me.'"* Our participating teachers identified several constraints regarding their roles as educators of beginning teachers: (a) the solitary role of a cooperating teacher in meeting the particular learning needs of a teacher candidate, (b) how to articulate one's thinking and decision-making processes adequately, and (c) the individual capacity to reflect on one's own practice to share it with a teacher candidate. Interestingly, they began to articulate a range

of possibilities within those boundaries. Articulating a pedagogical model to address some of these constraints, Dave suggested that:

[We ought to] go more toward co-planning and co-teaching, especially co-teaching during the first couple of weeks: help teacher candidates to shift from teaching material to teaching students. They are immersed in material and not so conscious of kids – planning should be done in collaboration. We must do the work together.

Dave's contribution focused the discussion more on the cooperating teacher than the teacher candidate, specifying a locus for the learning that, until that point, had been at the edges of the Conversation. Lee also acknowledged a need for more cooperative work, critiquing the teacher candidate/cooperating teacher relationship being characterized as a team, but only *"as long as you do it my way."* He noted that conformity to a particular version of planning is an expectation commonly held by cooperating teachers of their teacher candidates. Lee, further recognizing the possibilities within the boundaries, added that although he was conscious of co-teaching, *"teachers need to let it go,"* something he found difficult to do in actuality.

Seeking to further the dialogue about what might be possible within current parameters, John, an adult educator and researcher, wondered aloud if they ought to interrogate more carefully assumptions about teacher development (e.g., stage theory). Without intending it as such, his provocation caused the discussion to retreat from the general to a grasping of the specific, spiraling away from the idea of developmental stages for teacher candidates to pass through, and arguing for the inappropriateness of a one-size-fits-all model. Jane, an elementary school principal, reflected her own consciousness of this issue: *"Even if a teacher candidate is struggling, there needs to be a way to keep the learning going,"* suggesting the many ways to learn to become a teacher and teachers' obligation to educate themselves and to be alert to these ways. Kathleen, a secondary school art teacher, agreed: *"That is our philosophy in teaching: We don't all learn at the same rate, in the same ways. We cannot ignore them or let them go. We must address this."* Discussion ensued regarding whether people have an intuitive ability to teach or not, and if not, what might it be that we could say to them? Continuing the thought, Jane responded:

Well, you find out a way to teach them, that's what I think. I shudder to think of how many skills I brought to this practice when I was 19 and first started teaching. Now, I'm good. And it was a long, strange trip but if somebody had said to me when I was 19, 'You aren't good and you're never going to be good,' then we would have lost me and I don't think that would have been a good idea. Stuff happens and I think that's our job to find a way to teach anybody what it is they want to know and I think that's part of the trip.

Teachers such as Kathleen and Jane, obviously committed to the practicum experience as a co-operational space, wanted to know how to maintain the possibilities in that space as long as was feasible, even when there were difficulties, in short, recognizing the need for enabling constraints. The practicum was a learning space in which meaning developed along multiple pathways. Janet summed up one of the meetings of the Conversation near the end of the two years by provocatively asking: *"How prepared are the teacher candidates for the notion of a lived experience and not just the technical proficiency [of teaching]?"*

These types of discussions were quite extraordinary in that, although all teachers clearly had a common understanding of the boundaries of their work, they articulated multiple pathways and possibilities within those boundaries as they offered support to their teacher candidates and sought to better educate themselves. Not unlike previous discussions, a "hall of mirrors" (Schön, 1987, p. 296) became increasingly evident in the Conversation, where the group exemplified the sort of professional engagement among themselves that they hoped might occur with their teacher candidates on practicum. Although they were in no doubt about the boundaries that defined and gave shape to their work, they simultaneously argued that it was equally important to be open to the full range of possibilities within those boundaries.

Decentralized Network

We initially conceived of *The Teacher Education Conversation* as a network, following Lieberman and McLaughlin (1992), where cooperating teachers in the group would form a nexus around which other teachers would be invited as the Conversation expanded. The (long term) argument being made by the group was that the School District would then have a large pool of cooperating teachers who were both capable and reflective teacher educators by dint of their active involvement in the Conversa-

tion. Our initial conception is thus modeled as in Figure 2a, "Network Model As-Imagined." The concentric circles represent the years in the project and the growing numbers of teachers who had become part of the network.

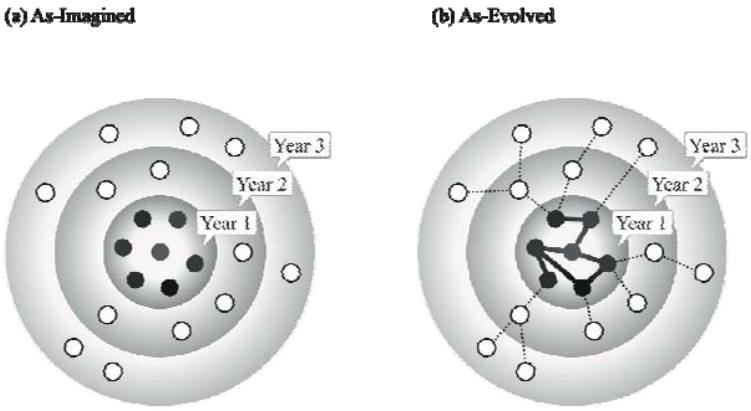

Figure 2. Network Models As Researchers Imagined and As the Research Evolved

In reality, the Conversation evolved quite differently from the growth pattern represented by the concentric circles in Figure 2a. There came a point around the 9th or 10th meeting where the teachers within the Conversation were interested in sharing their experiences with their colleagues (both in their own district and with others around the province) who were not participants in the Conversation. They collectively wrote an article that was published in the January/February, 2009, issue of *Teacher,* the journal of the British Columbia Teachers' Federation

(Ward & Grigoriadis, 2009). In addition, partly as follow-up to the article in *Teacher*, and partly out of a desire to extend the reach of the network, participating teachers developed a workshop as part of the District Professional Development Day in February 2009. The Conversation also organized an afternoon workshop for their District colleagues later in the same school year, coinciding with the time when practicum students were in their schools. Network participants, who met for a planning day in advance of the workshop, organized the session during which they workshopped three key topics: providing support for teacher candidates, pupil assessment, and observation techniques. These three topics, which are about advisory practices during different phases of teacher candidates' development, were planned around small group discussions and activities where teachers in the session had the opportunity to collectively explore their current practices. Thirty teachers attended the workshop. This initiative was teacher-led; hence the connections between teachers in this school district grew outward, expanding the reach of the local network to the wider community of teachers in the district. Some of these new contact teachers have since joined the monthly meetings of the Conversation. As a further follow-up to this two-hour workshop, the group planned a series of workshops for their district colleagues over the 2009/2010 school year.

In addition to these teacher-led activities, the research team helped the Conversation gather and organize the 200 plus issues that they identified over the course of the first two years into an inventory that is currently being piloted in British Columbia, the *Mentoring Perspectives Inventory* [MPI] (Clarke & Collins, 2009b). This instrument includes items that profile both challenges and motivators for working with teacher candidates on practicum and provides direct feedback to cooperating teachers on their work as cooperating teachers (Clarke & Collins, 2009a) (see Table 2).

The profile generated after completing the inventory is intended to help cooperating teachers identify aspects of their work that are particularly rewarding or satisfying as well as other aspects that may be challenging or problematic. The MPI, then, can be used as a starting point for intentional and deliberative exploration, "to prompt a wider discussion of advisory practices and to promote thoughtful discussion among

School Advisors, Faculty Advisors, and Student Teachers as well as between schools, school districts, and universities" (Clarke & Collins, 2009a). The development of the MPI is a further example of the Conversation reaching out, but not necessarily seeking to increase directly the immediate participant group.

As we reflect on the evolution of the network, we realize the "As Imagined" network model does not adequately reflect the network evolution that occurred over our two years of working together. Rather, we see a more distributed pattern (Davis & Sumara, 2006) where individual participants in the Conversation were more like nodes in their own local networks, connected to each other but also connected to many others in new and interesting ways that have evolved through the activities of the Conversation. This "As-Evolved" model is shown in Figure 2b. In our As-Evolved network model, Conversation participants are primary nodes, located centrally in the diagram. Through meetings and activities of the collective, connections developed among these individuals. Others who have become connected to the group through activities of the network can be considered secondary nodes in the overall network, and the dotted lines between primary and secondary nodes model their participation in the network activities. Further connections become possible at a tertiary level as individuals (secondary nodes) develop new connections to network activities, but not necessarily through primary nodes. For example, a teacher who was not a participant in the Conversation could take the MPI and, along with colleagues at his or her school, begin a new Conversation.

Finally, as we complete this phase of the analysis of the Conversation, we note that the group has taken on a new name, the *School Advisor Network* (i.e., 'school advisor' is the term used for cooperating teachers at the University of British Columbia). Thus, the self-organization evident earlier is now represented by the group's development as a distinctive identity of its own in keeping with moves and directions taken up during the two years of the project.[2]

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[2] Although we report in this article the first two years of this research, the project has taken on a life of its own, extending as of November 2010 into its fourth year.

Table 2

Sample items from Mentoring Perspectives Inventory (Clarke & Collins, 2009)

Challenges
Developing and sharing get-acquainted activities with Student Teachers.
Outlining what Student Teachers can expect from me as a Cooperatng teacher.
Clearly articulating the evaluation procedures at the start of the practicum.
Developing a meaningful mentoring relationship with my Student Teacher.
Allowing flexibility for Student Teachers to develop at different rates.
Clarifying issues of professionalism with Student Teachers.
Motivators
Supervising STs provides me pleasure and enjoyment.
Student Teachers keep me on my toes to hone my own teaching skills.
It's the 'right thing to do' to help and mentor Student Teachers.
It's satisfying to know I can facilitate a Student Teacher's development.
I'm making a real difference when I coach beginning teachers.
Supervising helps refine my own teaching practices and skill.

Note: Participating cooperating teachers were asked to rank the challenges and motivators according to the following scale: Not, Slight, Moderate, Significant, Critical

CONCLUDING REMARKS

When we began the Conversation, we were not sure where the initiative would lead. The three initial clusters of concerns – operational, professional, and programmatic – evolved through conversation into a rich series of discussions moving in and out of focus on a variety of issues, both particular and general, that defined and framed the work of these cooperating teachers. In tandem with this initiative, we have attended, in

this analysis, to particular aspects of complex systems to think about our collective efforts as teacher educators.

The Conversation began as an invitation to teachers to discuss their work as cooperating teachers. Beyond this invitation, we allowed discussions to unfold and be governed by the group's direction. As illustrated in our analysis, we discerned certain characteristics to define complex systems. The on-going success of the group is, in part, due to our efforts to be attentive to the emergence of these characteristics and, once identified, being mindful of them as the Conversation evolved. We have not been able to as readily identify other aspects of complex systems within the Conversation such as internal redundancy and internal diversity. We believe that the relatively small size of the group may be one reason for these absences. As of spring, 2010, the Conversation neared the end of its third year (without three of the principal university instructors/researchers—two are on extended leave overseas and one has taken up a new position overseas), we hope that the on-going data will provide further insights on these and other issues.

In sum, the Conversation has encouraged participating teachers to generate new ways to think about the practicum and about their work with teacher candidates. This activity led to a cycling through issues that were named and elaborated through our work together. Many issues that emerged in our discussions were embedded or nested within the layers of teachers' work, including personal and professional responsibilities to help novice teachers develop and learn. Further, the group also explored relationships between the university and the schools. Tensions between traditional notions of professional development and teachers working in learning communities were apparent, and further, as teachers considered the learning path and background knowledge of their teacher candidates, they were drawn to consider their own knowledge and assumptions about teaching and learning to teach. Many factors enable or constrain teachers in their advisory roles. The relationship between a cooperating teacher and a teacher candidate has the potential to enable the sorts of explorations evident in the Conversation that deep-en and widen teachers' understandings of their work, both in the classroom and in mentoring teacher candidates. Much of our Conversation took unanticipated turns: what we first imagined might be a centralized network

never actually evolved, but morphed on its own accord into a distributed network that has continued to grow and develop.

By way of drawing conclusions from our analysis of the first two years of the Conversation, we highlight key tensions that emerged from the study and suggest both the challenges associated with and the potential offered by a complexity science framing for teacher professional development. In our case, the underlying concept of a network as a dynamic system was central to our engagement with the teachers. On this basis we offer the following five propositions that serve to guide our continued work with the *School Advisor Network*, hopefully offering a sensitizing frame for those contemplating similar projects:

(1) *Naming issues, but not over-specifying them*. General naming led to particularization through the openness of conversation but closure was held at bay when necessary to allow for deeper exploration of issues and ideas.
(2) *Holding a desire for certainty alongside a need for flexibility*. This tension takes naming issues further because codified rules or expectations can become inflexible and therefore potentially self-defeating. Cooperating teachers echoed the need to remain flexible and open to contingency, both in the dynamics of the classroom and for the individual learning needs of teacher candidates.
(3) *Being conscious of the respective institutions, but taking control over one's own professional development*. Developing ownership in our collective work during the project existed in tension with the participants' tendency (especially at the beginning) to look to the researchers for guidance. Intentional effort to reduce any hierarchical structure helped mitigate this tension, such as locating the responsibility for beginning teacher education in a space between the field and the academy. It is worth noting that the teachers involved in the Conversation have organized two professional development sessions for cooperating teacher colleagues in their school district.
(4) *When small is big. R*ecognizing that the success of the network does not lie in its immediate or readily visible member numbers but rather in the strength of the connections between the nodes within the network. Although the actual number of teachers and university instruc-

tors/researchers participating in the Conversation did not grow significantly over the course of the first two years of the Conversation, its influence and effect have been disproportionately large by comparison. Curiously, this steady and manageable size of the primary node has been enabling not disabling.

(5) *Improvisation as a key ingredient to a successful organization*. Although initially counterintuitive, the Conversation's ability to act on the spur of the moment to explore and test out new ideas has proved to be one of its greatest strengths. Although, at times, there was a danger that the Conversation might become somewhat nebulous because of its willingness to follow new leads and try new directions before seeking closure on various items already tabled, this has not been the case. Indeed, it has proved to be an important strength.

As university facilitators, we sought a different kind of learning experience for our cooperating teachers, an intent supported by Gadamer's (1989) notion of conversation. Through collective exploration of roles, relationships, professional identity, and interaction on multiple levels, we encountered and learned from the "unthought" (Ellsworth, 2005). For the Conversation to evolve into a network of cooperating teachers, it seemed important to have the opportunity to think without already knowing what *should* be thought, *a priori* or *a posteriori.* Rather than reaching for an endpoint, our explorations have meandered in, through, and around key issues, bringing all of us to a greater appreciation of the diversity and value of professional engagement in such spaces as the Conversation as a site of teacher learning. Within our local setting, this network has the potential to expand beyond the boundaries of the Conversation, as other teacher educators encounter our reports and analyses. Further we conclude that the complexity science lens we used to frame the Conversation has enabled a different and potentially powerful interpretation of how relationships in teacher education might be conceived, sustained, and supported to the benefit of all involved. Our analysis shares many features of cooperating teacher work that have been highlighted by other researchers, but the perspective we brought to bear during this study – a complexity science sensibility – has shaped our thinking in distinctly different ways that we believe brings members of our

profession into a more substantive and sustained dialogue about their work that is not evident in other settings.

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