

## Using Online Social Networks to Foster Preservice Teachers' Membership in a Networked Community of Praxis

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### Abstract

New social technologies offer new opportunities for creating online communities of praxis in the preparation of preservice teachers. In this design research study, 22 preservice teachers in a social studies methods class conducted online class discussions inside the National Council of the Social Studies Network Ning, a social network for social studies educators. These preservice teachers engaged in series of reflective dialogues blending theory and practice—the hallmark of praxis—with their classmates, with other preservice teachers from around the country, and with practicing social studies educators from around the world. They also expressed a strong intent to engage in professional learning networks and communities of praxis in the future, although the Ning was ancillary to these intentions. These findings both hold promise and offer crucial guidance for other teacher educators. When implemented with attention and intention, online social networks provide promising opportunities for students in teacher education programs to engage in networked communities of praxis that can provide opportunities for colearning throughout a teacher's career.

Good teachers continually learn from one another as they strive for meaningful and effective praxis (Freire, 1970), which we define as the virtuous interplay of reflection and action in effective educational practice. The benefits of praxis-oriented colearning among preservice and induction teachers have been well documented (Goddard, Goddard, & Tschannen-Moran, 2007; Goodnough, Osmond, Dibbon, Glassman, & Stevens, 2009; Kardos & Johnson, 2007; McClure, 2008). These studies show that teachers who have the opportunity to develop their craft in collaboration with others report both positive learning outcomes and satisfaction with the collaborative process.

In-service and veteran teachers similarly improve their own teaching practices when they participate in professional learning communities (DuFour, 2004; Senge, 2000) that enable a combination of reflective reading and conversation along with concrete action and experimentation in their own classrooms. As has been well-documented for both children and their teachers, opportunities for reflecting upon practice enriches conceptual understanding, and deeper conceptual understanding improves practice (Bransford, 2000). Iteratively linking nuts and bolts practices with relevant theory through sustained reflection about action is the gold standard of professional development and professional practice.

For a variety of reasons, however, both preservice and professional teachers have a hard time finding, creating, and sustaining rich communities of praxis. Wenger's (1998) work on communities of practice provides the inspiration for our concept of communities of praxis. The two concepts are similar; we substitute praxis for practice, however, in order to emphasize the essential continued interplay of theory, reflection, and action.

The day-to-day demands of teaching can be so overwhelming that teachers understandably fail to find time for yet one more meeting in an already overly demanding schedule. Even if they do manage to meet with colleagues to discuss practical matters, plan the next lesson, or look ahead to the following unit, they may not be able to make the time to read and reflect about broader theories that could inform their practice. Furthermore, teachers are often isolated. Depending on the size and location of their school, they may have no colleagues in their discipline or grade level with whom to join in creating a useful and fulfilling community of praxis.

Teacher educators, thus, face the challenge of inducting preservice teachers into communities of praxis and teaching them about the value of colearning throughout their teaching career, while acknowledging how hard these practices are to sustain. As teacher educators ourselves, we have wrestled with this dilemma. In our roles teaching the social studies methods course to students enrolled in our teacher education program (TEP), we try to teach our students directly about the value of colearning within communities of praxis. We both model and give our students opportunities to experience such participation through readings, peer editing of unit plans, coplanning and coteaching exercises, Looking at Student Work circles (Little, Gearhart, & Curry, 2003), encouraging strong relationships with mentor teachers, and our own collaborative teaching. In so doing, we build on core practices within TEP as a whole.

TEP students are immersed in collaborative action and reflection throughout the 11-month program. Their first experience is teaching summer school as part of a three- to four-person team, in which equal time is given to teaching and planning/reflecting/debriefing. They are then assigned either singly or in pairs to a mentor teacher before the school year begins. They collaborate, coplan, and coteach with that mentor teacher and their department throughout the year. TEP students also meet in a school-based, cross-disciplinary advisory group every other week to discuss problems of practice. In our methods course and across the program, therefore, we model and implement praxis-oriented colearning, not only to provide our students rich learning opportunities, but to encourage our preservice teachers to continue these practices as they move on to their teaching careers.

Until recently, however, TEP students' colearning opportunities have been confined to their professors and fellow students plus the mentor teachers and colleagues at their practicum school sites. These individuals provide rich resources for reflective inquiry and praxis-oriented experimentation, but we wanted to broaden the circle of conversation. We also wanted to induct our students into an ongoing community of praxis that they

could continue to be members of after they graduated and joined the ranks of full-time practicing teachers. In fall 2009, therefore, we decided to have our social studies methods students conduct their online reflective discussions not on a closed discussion board, as had been our previous custom, but on the National Council for the Social Studies (NCSS) Network Ning (<http://ncssnetwork.ning.com>)—an online social network for social studies teachers. In so doing, we anticipated one of the recommendations of the National Education Technology Plan, which calls for improving learning through “connected teaching” by having teachers “connecting to content, expertise, and activities through online communities” (Office of Educational Technology, 2010, p. 42).

Online social networks for educators have proliferated in recent years (Duncan-Howell, 2010; Lieberman & Mace, 2010); some of the largest include tens of thousands of educators. Many of these networks function like niche versions of Facebook—members can create profile pages, leave messages for one another, publish blogs for other members, and create networks of friends.

As teachers have begun colonizing these online spaces, researchers have begun the work of documenting their activity and hypothesizing the kinds of benefits that in-service teachers can enjoy from participating in these online communities. Research conducted in these online teacher social networks has found that they can allow teachers to diversify their networks and to gain access to human and content resources not available locally (Schlager, Farooq, Fusco, Schank, & Dwyer, 2009). They also give teachers agency in coconstructing their own personalized programs of professional learning (Lieberman & Mace, 2010).

Hur and Brush (2009) interviewed teachers who participated in online teacher social networks and unearthed five reasons why teachers participated in these networks:

1. To share emotional aspects of teaching, such as joy and stress.
2. To communicate about situations that would be awkward to discuss in local settings.
3. To combat isolation.
4. To explore new ideas about teaching resources and strategies.
5. To experience a sense of camaraderie.

Although research into these networks is still new, these findings suggest that these teacher online social networks can serve as online communities of praxis, with a special role for supporting teachers who work in school settings without opportunities for collaborative colearning among physically proximate colleagues.

By transferring our discussion to a public network comprising nearly 1,000 other social studies teachers, teacher educators, and preservice students, we hypothesized that our students would reap two kinds of benefits. First, we thought that NCSS Network Ning would be an effective environment for students to develop an orientation toward praxis, where students learn how to think about teaching as a process of inquiry and investigation that links big ideas and normative principles with specific pedagogical, organizational, and procedural techniques. In so doing, they would gain pedagogical content knowledge (Grossman, Schoenfeld, & Lee, 2005; Shulman, 1986) by connecting theory and practice to gain insights into both.

Second, we expected that by both modeling and enabling our students to participate in colearning opportunities within a collaborative, networked community of praxis, students would increase their commitment to engaging in habits of networked, collaborative

colearning for the rest of their careers. By seeing and experiencing the benefits of colearning with others, including geographically distant but technologically proximal colleagues, our preservice teachers might continue to seek out such opportunities in the future.

These two hypothesized benefits animated a design research study conducted over the 2009-2010 academic year with one cohort of preservice history and social studies teachers enrolled in our methods course. We asked two research questions:

1. Is a professional online network such as the NCSS Ning a conducive environment for preservice teachers to develop an orientation toward praxis?
2. Do preservice teachers who are required to participate in an online, networked community of praxis in their chosen discipline value and express an intent to seek such opportunities in the future?

To address these questions, we taught our methods course as normal, except that we required students to post and respond to praxis questions on the NCSS Ning on a biweekly basis. After the course was over, we collected and analyzed two sources of data: the content of all conversational threads on the Ning that our students initiated or participated in and follow-up interviews with 9 students after the methods course and practicum teaching had ended.

All interviews were conducted by the first author, who was not a teacher of the course or in any other authoritative role over preservice teachers in fall 2009. The second author, Meira Levinson, taught Harvard's social studies methods course from 2007-2009. In the first 2 years, the first author, Justin Reich, was the teaching fellow. In the third year, the year this study took place, the third author, William Johnston, was the teaching fellow. This created the advantageous situation where the study was primarily conducted by Reich, who knew the course and program intimately but was not directly involved in teaching the cohort of students participating in our design experiment.

We found that the Ning was an environment that allowed for real-time discussions of praxis that engaged not only our students, but other preservice and in-service teachers from around the world. The students expressed a clear intent to engage in professional learning networks and communities of praxis in the future, but the Ning was ancillary to these intentions. These findings hold both promise and cautionary guidance for other teacher educators who seek to help their students join and develop online professional learning communities and engage in praxis-oriented learning and teaching.

## **Methods**

### **Pedagogical Design**

To assess our research questions about the efficacy of using online social networks with preservice history teachers, we conducted a design research study. Design research (Dede 2005) is a form of action research where researchers design a pedagogical intervention, conduct the intervention with a group of learners, and evaluate its efficacy. The research design is particularly useful for circumstances involving novel instructional (including technological) approaches, as without preliminary studies it is difficult to ascertain what variables and considerations should be included in an evaluation design. We designed and integrated an online social network, a Ning (<http://ning.com>), into the fabric of our course and then systematically evaluated students' response and reactions to our efforts.

This attempt was not our first to encourage praxis-oriented conversations through the development of an online professional learning community. During the previous 2 years we taught the course, we encouraged discussions about praxis through discussions on an internal, class-specific wiki. Conducting these discussions in an online forum had several advantages. The conversations invited more diverse participation, as students who were reticent to speak in class were more expressive in an online forum. Students could take more time in formulating their ideas in an asynchronous environment than in the back-and-forth of a face-to-face conversation.

Unlike our in-class conversations, these conversations could be archived online indefinitely. Hence, students could refer to them as they worked on their unit plans and lessons, and we could refer to them for assessment and evaluation. On the other hand, the conversations included only class members and teaching staff, so the range of participants was necessarily limited.

Moving these conversations from an internal wiki to a Ning online social network allowed us to move these conversations from our own private learning community to a community including hundreds of social studies educators. The [NCSS Network Ning](#) incorporates many of the features and affordances found in other contemporary online teacher networks. It was developed in 2008 by Thomas Daccord and Justin Reich as a social network for history teachers. It was based on two other successful social networks: Classroom 2.0 ([classroom20.com](#)), a social network for teachers interested in Web 2.0 tools, and English Companion ([englishcompanion.ning.com](#)), a social network for English Language Arts teachers.

In fall 2009, when we conducted this study, the NCSS Ning community had about 700 members and about 15 groups, including groups for U.S. history teachers, world history teachers, elementary teachers, and teachers involved in Teaching American History grants. It now has over 1,200 members and over 25 affinity groups. By having our students conduct their praxis discussions on the global discussion forum of the NCSS Network Ning site, we hoped to host our conversations in a much larger salon. There appeared to us to be no downside—the Ning had functions that allowed us to recreate what we were doing on the wiki, as well as additional potential for mutually beneficial exchange. Our objective was to entice practicing teachers to join our discussions so we and our students could learn from their insights.

All 22 students in the methods course participated within the NCSS Network Ning as a required component of the course. Students who did not wish to participate publicly were given the option of conducting alternative assignments, but none availed themselves of this option. The course instructors created a Ning group specific to our methods course, which turned out to attract some external members almost immediately. Students joined both the methods course group and other groups relevant to their practicum placement. Each week, two students posted summaries of the course readings on the methods course group page. They also each wrote a praxis question or comment that in some way responded to, expanded upon, or attempted to apply an idea from the readings. Students posted these to the Ning as a whole or to one of the subgroups (world history, geography, etc.). The exact assignment instructions were as follows:

[One week during the semester], you are also responsible for posting one praxis question...Please note that this is a *praxis*—not “practice”—question. Why do we make this distinction? We do so because praxis, by definition, is the act of reflective, theoretically-minded practice. Since this concept is fundamental to good teaching, we feel that it is important to return to it consistently throughout the course. In addition, we can benefit by sharing our praxis-related questions,

ideas, struggles, and breakthroughs with a larger teaching community, as can be found on the NCSS network. This praxis question should be a true combination of theory and practice, rooted in the course readings as well as your teaching experiences, but not leaning too much one way or another.

In addition to this one-time requirement, students were asked to initiate a discussion thread or respond to someone else's post on the Ning every other week during the semester, but we did not enforce or regularly remind students of these requirements.

### **Data Analysis Design**

To evaluate the effect of these discussions on students' colearning, we evaluated two primary sources of data. We examined the 26 discussions that our preservice teachers started or participated in on the Ning. We collected the transcripts from this entire set of conversations, which included 138 total posts, and coded and analyzed this set of conversations to examine who participated from the course and how often, who participated from outside the course and how often, what kinds of conversations were started, and what kinds of conversations gained traction.

In addition, we interviewed 9 students at the end of the school year, after the fall methods class and after their spring semester at their practicum site. (We invited all students to participate in the interviews; the 9 we interviewed both agreed to participate in the study and could find the time to do so at the busy end of the academic year.) In these interviews, we asked students about their experience with the methods course, the kinds of collaborative opportunities they had at their practicum site, and their specific experiences with the Ning site.

For both of these data sources, we conducted two rounds of analytic coding, beginning with a process of open coding (Charmaz, 2006) to identify emergent themes relating to colearning and praxis. We refined these themes in a series of analytic memos and then conducted a second round of issue-focused coding (Weiss, 1995) to assess the degree to which the Ning discussion threads or the student interviews provided evidence to confirm or disconfirm the two hypothesized benefits. In addition, we conducted a simple quantitative analysis of the Ning transcripts, counting the number of threads and the number of contributors on each thread, as well as analyzing the types of contributors and discussions.

### **Results and Discussion**

Over the course of our one semester (13-week) methods course, 22 students created 24 different threads on the discussion forums of the NCSS Ning site that generated 114 responses. In addition, the students contributed to two threads initiated by other forum members. Among the threads started by students in the methods class, the number of responses ranged from a low of 0 to a high of 18, with the majority of the threads having between two and nine responses. These responses came from a variety of sources. Students in the methods course contributed 46 responses; the course instructional team contributed 16 responses. From beyond our community, discussions included 24 responses from 16 practicing educators from nine different U.S. states and three foreign countries. In addition, 19 responses came from 13 preservice teachers enrolled at the University of Florida, and nine responses came from seven professionals in the field who were not teachers.

Thus, the move from a private wiki to the public NCSS Network Ning was successful in enabling students to learn from and interact with a much broader array of engaged and thoughtful professionals than we could provide solely within our university setting. Although this level of broad participation was encouraging, an analysis of the substance of the interaction is needed in order to assess fully the benefits of hosting praxis discussions on the NCSS Network Ning.

### **A Venue for Praxis-Oriented Discussion**

Our first research question asked whether an online professional network such as the NCSS Network Ning was conducive to developing an orientation to praxis. To address this question, we evaluated the student-initiated threads to assess whether participants engaged in active reflection that merged practical and theoretical considerations. Across the majority of threads, students engaged a diverse community of practitioners in serious discussions of thorny dilemmas in classroom teaching. The four most active student-initiated discussion threads were titled as follows:

- Is Video Necessary in the Classroom?
- Is Teaching History About Forming Identity?
- How to Develop Self-Advocates?
- Classroom Management vs. Relationship Building- A Necessary Dichotomy.

These conversations explored different aspects of history and social studies education. As required by the assignment, however, they also all linked normative or theoretical ideas with classroom practice in some way. Few of the postings referenced specific authors or theories, as such, but most of them built on readings and class discussions to pose questions about effective or appropriate teaching practices in light of teachers' theoretical or normative commitments. Both our students and other participants in the Ning, whether preservice teachers in Florida or professional teachers, seemed to be highly engaged by these kinds of questions.

These four conversations also illustrate how much of the activity in the forum tended to encompass both the theoretical and practical domains of teaching—a merger that is the hallmark of praxis. The question, “Is teaching history about forming identity?” (<http://tinyurl.com/266q4md>) represents this kind of discussion, as is seen in this thread's initial set of questions posed by one of our students:

I have been contemplating and wrestling with the role of a student's identity in learning history. In a recent conversation, a colleague of mine mentioned that what and how he would teach a class would depend on the students he was teaching: he would adapt what he taught to what his students found to be interesting or relevant because he wanted to use history to help them explore and determine their personal and cultural identity.

I found myself nodding to this, agreeing that one of the important functions of studying history is to understand one's ancestry and heritage, to create a concept of one's origin (both as an individual and as a member of a larger group or community). The more I think about it, however, the more I begin to question how much history really is about identity. Does U.S. History have to focus on one's students' identities? Should it?...I wonder, then, if teaching history should be less about forming identity and more about establishing relevance (with the assumption that the former will be a result of the latter).I'm still uncertain about

this, but I'm glad I wrote it out. If you all have thoughts on this, I would love to hear them.

These questions were not necessarily anchored around a particular lesson, practice, activity, or experience, but instead they engaged with some challenging normative questions that undergird the day-to-day decisions that all teachers make. At the same time, however, this query was not a purely theoretical or abstract rumination, removed from the realities of the classroom experience of students.

One particularly interesting development in these praxis-oriented discussion threads initiated by the students was that the responses also demonstrated a similar balancing of theory and practice. Many of the responses to the thread "Is teaching history about forming identity?" illustrate this point, such as the reply by an experienced high school teacher from Georgia:

I, too, have mixed feelings about identity and the teaching of history and, like you, believe relevance is critical. With regard to U.S. History, I believe it IS important to both relate to students' own, individual identities (be that racial, gender-based, geographical, or other) AND have relevance. James Banks has referred in multiple works to the need for a shared, "authentic unum," something we don't yet have in this country. That ALL of our kids find a fit within the broad concept of what it means to be American should be our goal - my opinion. That most of us are somewhat constrained by state performance standards and time makes this challenging in a multiethnic, cross socio-economic (if that's the appropriate term) classroom!

The following reply was from a student at the University of Florida:

I think that history has the potential to empower students and motivate them to learn more about/develop their personal identities. With all history courses, and especially those in public schools, there are certain curriculum points that must be met each year. For this reason I think it is important to present the necessary content to the students while helping them see how it relates to their lives. This doesn't mean that you have to ignore or exclude those parts that are less relevant, it just means that we as teachers need to find creative ways of helping students see the applicability of history in their lives. Students bring a lot of diverse backgrounds to the table and it would benefit the students to explore them in the classroom. In the end, I think there needs to be a balance of identity formation and relevance, and they will probably complement each other very well.

Throughout this rich dialog, preservice and in-service teachers from around the country, teaching in communities with different values, traditions, curricula, and students, wrestled together with one of the most important and challenging questions in social studies instruction. They exchanged perspectives, citations, questions, and advice in the service of reflecting on one of the central dilemmas of the craft.

Turning to a discussion thread that seemed to be more procedurally oriented on the surface, participants in the discussion *Is Video Necessary in the Classroom?* (<http://tinyurl.com/239qgym>) addressed broad issues around 21st-century literacies in the context of a particular pedagogical dilemma. Some discussion of short-term practical issues focused on how to incorporate short film clips into a typical classroom period. The discussion also went beyond these details to interrogate the long-term significance of these decisions. For example, most respondents agreed that video had certain valuable



uses in the classroom, but they also thoughtfully questioned the costs of relying too heavily on this type of material. One of our methods students posted the following response:

In part, I agree with the importance of incorporating video into the classroom both to prepare students for the demands of the 21st century and to use critical analysis to study primary sources (or, as Susan suggests, biases and ideologies presented in documentaries). On the other hand, I wonder if something is lost in relying heavily on video—even if it is a video that allows for critical thought and analysis. As much as I love the context that video can create or elaborate on and the immediacy and seeming relevance of watching a film, I want to say that there is something important in touching documents, in creating narratives and imagines through the imagination, in using different media—media that has weight and heft— to round out a historical picture. Generally, I do think there is an importance to that.

Similar to the discussion about using history to form identity, this preservice teacher was figuring out how to balance competing teaching practices with the decision having implications that extend beyond the practicalities of lesson planning toward broader issues of student motivation and 21st-century skill development. This point was reinforced by the response from a veteran practitioner that followed our student's reply:

Why not use both? I find it sad that at the elementary level, so much is visual to reach your diverse audience. Kids get to draw and show what they know, then write from that drawing. For many kids, the drawing is more detailed; Thus I can elicit more written work from the students by asking questions about what they have drawn, or what they see in a primary source picture. As kids get older, less video seems to be used. So many of our diverse students get lost in only the written world, where the written world would be accessed by so many students easily if the video was an introduction. I always learned my best, right through college, by seeing video. Imagine learning about Martin Luther King, Jr. without see him recite his "I Have a Dream" speech? No teacher should rely just on video, but even on Conference Reports there is a section called, "Students learn from a Variety of Sources." This is the real world. We can now bring the world to our kids in visuals and with the written word.

Rather than present a definitive answer or solution to the dilemmas being presented, the responses from both of the cited threads move the conversation forward by acknowledging the many balancing acts that teachers negotiate on a daily basis. This balancing act goes beyond simple nuts-and-bolts teaching methodology to encompass ambiguous and value-laden issues such as equity, identity formation, and social justice. In a sense, the mental work of a teacher is an ongoing process of praxis, so it should come as no surprise that these conversations would be both procedural and theoretical.

Although the Ning environment and broader community enriched our class discussions in several dimensions, these same factors also constrained our discussions in other dimensions. In particular, the limited bandwidth of the discussion forum and the presence of an anonymous audience restricted the kinds of colearning that our students engaged.

Across all of the questions and responses, for example, our students rarely described a specific circumstance or classroom in detail. They rarely described the subject area, location, students or culture of their specific placement site; they rarely prefaced a question or illustrated an argument by describing a specific lesson or incident; and they

rarely asked a question directly relating to a specific problem of practice that they were encountering as they prepared for a lesson.

One possible reason for these omissions may be the limited bandwidth of communication enabled by an online forum. A story that might be quickly recounted in a face-to-face communication can prove quite time and space consuming to detail in writing. The Ning environment is also not particularly conducive to sharing resources or documents, which may be one reason why students did not solicit specific kinds of lesson resources or discuss specific plans or activities in their discussions. Moreover, the presence of an anonymous audience of strangers requires that questions and discussions be accessible to people who have no information about the questioner. In our class discussions, we can assume that everyone in the room has a basic familiarity with everyone else's practicum placements and the district as a whole. By contrast, students have to assume that their online conversational partners know nothing.

Examining a posting that provided specific context for a set of questions reveals some of the challenges of providing this context:

I'm interested in creating an environment that enables and empowers student learning. A question I've been pondering is: In what ways can "classroom management" build and erode classroom communities? In what ways can "classroom management" build and erode a teacher's relationship with individual students?

I've recently have had the opportunity to observe two classrooms that functioned very differently— in one, explicit, enforced expectations created (or at least appeared to create) a fairly quiet, regulated classroom environment. Students did not attempt to use cell phones, were generally silent when a teacher or a classmate was speaking, and they arrived on class (mostly) on time. However, in comparison, these students seemed less engaged and excited about learning in this classroom. I'm unsure whether they would consider this class to be their favorite, but my instinct tells me that the majority would not.

In the second classroom, there seemed to be fewer explicit rules and expectations. Students seemed to have more of a "control of the show." Cell phones were being used in class, students would sometimes interrupt the teacher, and would fail to stop talking when asked gently by the teacher. This teacher has a reputation for developing amazingly strong relationships with his students. Students who have gotten so upset in other classes that they punch a wall or window, are excited to come to his class and easily diffused when angry. They also repeatedly say that his class is their favorite.

Do stricter "classroom management" policies necessarily hamper one's ability to connect with students and gain their respect? If so, should we prioritize relationship-building or creating an "orderly" classroom? Or have my observations of these two classrooms led to false conclusions?

In contrast to other posts, which were typically one to two paragraphs in length, this posting required four paragraphs to propose an interesting topic, present two contrasting cases, and then pose a set of specific questions. Even so, the examples are more caricature than fleshed-out cases. Thus, rather than asking about the impacts of particular policies, strategies or activities that this student witnessed in either room, the question rises to a more abstract discussion of strictness versus flexibility, order versus relationships. It, nonetheless, sparked a lively discussion including preservice teachers from two teacher

education programs, veteran teachers from Pennsylvania to California, and even a National Elementary Social Studies Teacher of the Year.

Apparently, the opportunity to converse asynchronously and online with hundreds of strangers about teaching praxis enabled some important conversations while constraining others. Our students did not engage in conversations around lesson planning or coplanning, around resource sharing, or around constructively debriefing lessons or teaching experiences. The reason may have been the difficulty of sharing materials on the Ning, as well as the time-consuming nature of filling strangers in on the details of one's own teaching practice. It may be, too, that the kinds of conversations *not* enabled by the Ning were occurring elsewhere.

The preservice teachers have access to yearlong mentors, school-site colleagues, and advisory groups, which may provide the support needed for higher bandwidth discussions. For instance, one of our interviewees described how he shared a long bus ride to and from school with a colleague, which offered one of his most important venues for detailed reflection and planning.

Although certain forms of reflection did not blossom on the Ning, the students had many productive online discussions with diverse educators around how-to issues and large issues of pedagogy and philosophy. The NCSS Network Ning was conducive to these kinds of praxis-oriented discussions. In this respect, we were successful in designing a learning environment on the Ning that put students in a community of praxis with educators and preservice teachers from around the world.

### **Orientation Toward a Community of Praxis**

We conducted nine interviews with preservice teachers a few months after the conclusion of our methods course, near the end of their full-time teaching practicum. These interviews offered a window into how our students received our efforts to promote colearning and communities of praxis, both online and in our local communities and helped address the second research question. This data provides evidence regarding both what students thought of the Ning and whether they thought of the Ning in the context of their current or anticipated future practice.

As a result, the interview materials probed students' perceptions of collaboration broadly before delving into their opinions regarding the Ning. The consent forms explained our study in broad terms, framing our research around the efficacy of our methods course generally, and the interviews began with general questions about how students collaborated before turning to specific questions about their use of the Ning. Starting with a more general approach allowed us to assess whether or not the Ning was in the front of their minds when students considered collaboration and colearning both now and anticipatorily in their future professional practice. It also enabled us to assess students' attitudes toward colearning more generally.

The interviewed students were extremely positive about collaboration and colearning, in general. They all valued the diverse resources around them—professors, fellow students, mentor teachers, department chairs, colleagues at their practicum sites, the advisory group—and all of them envisioned collaboration playing a central role in their careers ahead in the classroom. As one student said of his job prospects for the following year, “The schools I've liked the most, like the ones I'm really trying to get a job at a lot right now are ones where I've seen [collaboration] happening a lot....Collaboration is huge.”

When asked general questions about opportunities for collaboration, however, few of the interviewees brought up the NCSS Network Ning exercises unprompted. Students were much more likely to discuss their mentor teachers, their professors, their peers, their advisory group, or their fellow teachers in school. The Ning did not appear to be at the front of these students' minds, or even to be reliably triggered by specific questions about communities of praxis. Furthermore, no student posted a question or comment to the Ning after our methods course was over. It did not become an active part of their colearning repertoire during their student-teaching practicum.

We suggest two reasons for the low profile of the Ning in our interviews. First, as an instructional team, we did not put a strong emphasis on the Ning activities throughout the semester. We reminded people to post on their appointed weeks, and we occasionally reminded people to keep up with the requirement to respond, but we were not particularly active in the discussion (contributing only 16 comments throughout the semester) nor did we regularly integrate the online discussions into our face-to-face class meetings.

Just as integrating this new practice into a routine was difficult for our students, so was it difficult for us. As one interviewee told us, "You just got the message that, like, it wasn't, you know, sort of a major requirement. And so, you just turned your attention to other things which were." No students had directly negative things to say about their Ning participation, but several suggested that other experiences were more valuable or important.

The second potential reason is that students were surrounded by other human resources with an intimate knowledge of their particular situation and personality. As one student explained,

But we also had our advisory group, our co-teachers, the other interns at methods class, all of these other people around us that we knew that we could kind of get immediate feedback from. And they knew us, and knew where we were coming from. So after a while it seemed a little...although it was helpful, it started feeling a little artificial and having to post to a website. Getting advice from other experienced teachers and getting a lot of opinions, when I'm already getting a lot of opinions, a lot of ideas. So I didn't feel like I had that need, especially when we had so many other things going on to do.

For students who were surrounded by opportunities for colearning with people who knew them well, opportunities for colearning with distant strangers over a medium with more limited bandwidth than face-to-face interactions seemed either inefficient or unnecessary.

In this respect, the Ning or other networked, online communities of praxis may resurface as a valued resource over the next few years, as students establish themselves as professional teachers outside the warm embrace of the teacher education program. Students affirmed the usefulness of being members of a discursive, praxis-oriented online community. One student commented, for example,

I remember I asked something about 'How do you balance having a structure and plan in your unit and keeping flexibility?' Now, that's a philosophical question that I want an answer to, because I know I'm going to struggle with it. But [on the Ning] I can hear advice from twenty different people.

Another student reflected on the value of the Ning for his praxis in light of the other course requirements:

There were some serious puzzles I was trying to figure out. And I actually got some useful feedback from people in the class and other folks that were just on, I think it was the World History group. So that was cool that people actually read it and responded to it thoughtfully and some of those people had to out of compliance....At times it sort of felt like one more thing. But I think that was equally balanced by a handful of times where I thought it was pretty neat that either I was able to respond to someone or I could say something that meant, like I said was important to me and people were responding to it. It was a real convenient piece of technology to use.

From the positive feedback students offered during the interviews, it seems clear that at least some students valued the opportunity to enter in online dialog with a diverse group of practitioners and that this opportunity contributed to our broader efforts to convince students that the best teachers are constantly engaged in colearning opportunities within a community of praxis. Of course, given that numerous elements of our methods course and teacher education program are designed to encourage colearning, assessing exactly how much the Ning exercise in particular contributed to our students positive disposition toward colearning is impossible.

Nonetheless, the interviews generally reinforced our conclusions from analyzing the Ning discussion threads: Online social networks represent a potentially promising venue for teacher preparation—especially if they are given high priority in the class and reinforced by professors' involvement or if students have access to few other collaborative opportunities. Although our hopes to induct educators into an ongoing, digitally accessible networked community of praxis do not seem to have been realized in a robust way in the short term, the real test is whether and how these teachers seek out such communities of praxis in the longer term.

### **Conclusion**

The authors of the National Education Technology Plan call for social networking sites to play a central role in the preparation and ongoing development of teachers. They encouraged the Department of Education to “leverage social networking technologies and platforms to create communities of practice that provide career-long personal learning opportunities for educators within and across schools, preservice preparation and in-service educational institutions, and professional organizations” (Office of Educational Technology, 2010, p. xviii). Our experiences suggest that this goal is worthwhile and achievable as a short-term measure with preservice teachers, but may require additional support and incentives to convert such platforms into career-long colearning networks of praxis.

In moving our private online discussions to the NCSS Ning social network, we found that students had meaningful conversations concerning praxis online during the semester they were required to do so. These conversations reinforced the learning occurring in our seminar and at students' practicum sites. Students also appreciated the chance to engage a diverse group of online conversationalists in reflective discussions about practice, pedagogy and philosophy. Our discussions drew together diverse voices from our students, preservice teachers in other programs, practicing teachers, and other education professionals. Our impression is that all of these groups benefitted from our interactions.

We recommend that other teacher-educators continue experimenting with moving elements of their courses into online, public venues. The loss of privacy that we experienced moving from the closed site to the NCSS Ning was far outweighed by the gains from bringing teacher voices from around the world into our conversations and from exposing students to online learning environments.

The primary shortcoming of the intervention was the limited engagement that some students felt toward our online discussions during the semester and their apparent uninvolvedness once they began teaching full time. One possible reason behind our students' perceptions of the Ning as an add-on rather than an essential tool is that both our class and the teacher education program as a whole promoted meaningful, deep, and ongoing interpersonal collaboration about questions of praxis. Students eagerly sought advice and feedback from many quarters and could choose to seek feedback from professors, peers, mentors and colleagues.

The Ning conversations may turn out to be an important seeding activity for when our students find themselves (unfortunately) more isolated as full-time teachers, rather than a crucial resource during the preservice teacher training itself. Indeed, several of our interview subjects directly suggested that they expected to use the Ning in future years.

The other primary cause of limited student engagement rested in our own insufficient contributions and efforts to hold students accountable for their participation. We treated the Ning community as an ancillary opportunity for students to continue their in-class conversations; students then turned around and described the Ning discussions as ancillary. We were, perhaps, guilty of trusting the technology and community to draw students in, rather than ensuring that these opportunities happened in the context of our full support and guidance. We hope instructors learn from our shortcomings and choose to treat these dialogs as a central part of the course rather than as an add-on component. Technology alone is not as engaging as technology in the service of clearly defined learning goals with clear support and expectations.

For researchers, great potential exists in continuing to examine how preservice teachers can benefit from participation in online communities of praxis. Previous research has found a number of benefits for teachers, or at least for some teachers in certain circumstances, from participating in online teacher communities (Hur & Brush, 2009; Lieberman & Mace, 2010; Schlager et al., 2009). To date, this budding line of research has focused exclusively on the impact of online teacher networks on in-service teachers. This study contributes to this research by highlighting how preservice teachers can also benefit from online teacher networks and how these kinds of environments can be enriched by the active, facilitated presence of preservice teachers.

Although our study was intended as a 1-year proof-of-concept research design, we have demonstrated sufficiently positive results for other researchers to pursue longitudinal investigations that track preservice teacher behaviors into their first few years of practice. In larger schools of education, it may be possible to randomly assign students, sections, or classes to participate in threaded discussion forums or public online teacher communities. Such an experiment could determine if a causal link exists between connecting preservice teachers to online communities of praxis and the possible benefits of these environments, such as a disposition to colearning and reflective practice or increased content understanding and technology confidence.

Moreover, much could be learned about the kinds of colearning behaviors that can best be fostered by Nings as opposed to other online platforms, such as course sites,

discussion boards, blogs, wikis, and so forth. Further design research should continue to map out the territory of possibility in this promising domain.

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