Teachers Learning in Networked Communities

NATIONAL COMMISSION ON Teaching and America's Future

Phase I Evaluation Report

August 2005

METIRI Group

TLINC – Teachers Learning in Networked Communities

In 2003 the National Commission on Teaching and America's Future convened a design team to launch the Teachers Learning in Networked Communities (TLINC) project. The initial one-year phase, funded by AT&T, involved a TLINC design team partnered with four communities, Pueblo, CO; Seattle, WA; Portland, ME; and Socorro, TX. The intent of that phase was to investigate how districts might incorporate networked learning communities into their school systems to improve professional practices, especially those related to new teacher induction.

The TLINC Design Team

National Commission on Teaching and America's Future (NCTAF)
Tom Carroll, Kathleen Fulton, and Irene Yoon

Center for Children and Technology (CCT)
Education Development Corporation (EDC)
Margaret Honey, Cornelia Brunner, and Lauren Goldenberg

College of William and Mary
Judi Harris

Center for Online Professional Education
Education Development Corporation (EDC)
Glen Kleinman, Mary Burns, and Kirstin Peterson

International Society for Technology in Education (ISTE)
Don Knezek, Brenda Aspaas, Lynn Nolan, and Mila Thomas

Metiri Group
Cheryl Lemke, Kirk Vandersall, Crystal Martin, and Andrew Wainer

Pepperdine University
Margaret Riel and Carolyn Gery

SRI International
Mark Schlager

Special thanks to AT&T, the TLINC sponsor, and to the school districts who participated in the first phase of the TLINC project.

For further information on TLINC contact NCTAF at 202.429.2570 or see www.nctaf.org.

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I. Executive Summary

In 2002, the National Commission on Teaching and America's Future (NCTAF) uncovered data that caused the nation to redefine the issue of teacher shortages to one of teacher retention. In their groundbreaking publication, *No Dream Denied: A Pledge to the Nation's Children*, NCTAF highlights the importance technology and communication networks play in retaining new teachers.

In 2003, in an effort to explore how online networks could be used to increase teacher retention, NCTAF launched the Teachers Learning in Networked Communities (TLINC) project. The initial one-year phase, funded by AT&T, involved a TLINC design team partnered with four communities, Pueblo, CO; Seattle, WA; Portland, ME; and Socorro, TX. The intent of that phase was to investigate how districts might incorporate networked learning communities into their school systems to improve professional practices, especially those related to new teacher induction.

The TLINC concept builds on research related to teacher learning, communities of practice, and online learning to create a learner-centered, flexible, interactive approach to meeting the needs of new teachers. The TLINC design team conducted planning sessions with each of the four districts and their local university, teacher training partners. Those sessions revealed useful information on the gaps between the opportunity of networked learning communities and the current vision and readiness of school districts and universities. This evaluation report frames the opportunities, challenges, conditions of readiness, and leverage points that will serve as a foundation for successful launching of the TLINC concept in rural and urban settings. While the focus was on potential benefits to new teacher induction, the full intent is to establish a networked professional learning community that increased the quality of learning across the school districts.

The role of the evaluators in the initial stage of TLINC was observational, formative, and documentary. As such, this report is written to document lessons learned, present preliminary analysis of readiness factors within districts, and provide recommendations for the next stage of TLINC.

This first phase of TLINC included initial models by the NCTAF design team, exploratory meetings in each of the four districts, online modeling of a professional learning community by the design team, and reports on findings for each of the districts.

The initial planning meetings in four district sites prompted local district and university staff to think beyond their normal parameters regarding teacher induction and professional development processes. Although their ideas on networked professional learning communities tended to be fairly limited compared to the transformational vision of the project designers, almost all the participants expressed interest in implementing changes that would improve teacher retention and morale. This is a good point of entry for TLINC in its next round of consultations and partnerships with districts.

The participating sites varied greatly in terms of their readiness to implement TLINC. Among the four, Seattle stood out as having the strongest technology infrastructure and understanding of professional learning communities, and it is the only site that will continue working with TLINC during the next phase of the project. Reasons for this varied, but were related to the fit between TLINC and district goals, and the overall readiness of

the district to embrace networked learning communities. The relationships already in place in Seattle will be a benefit to moving the TLINC project forward during the second phase.

The relationships between the school districts and the local university also varied, although in general there was strong communication and collaboration between the two institutions. This partnership between school districts and universities' teacher training programs is central to the embedding TLINC. Without strong and sustained cooperation between those individuals and organizations shepherding teachers from the pre-service to the early in-service years, the prospects for TLINC are challenging.

Respondents identified two significant, albeit traditional, roles for technology in their districts' teacher induction and professional development activities. First, in rural districts, educators said that technology would allow mentors to interact with novice teachers even when they were separated by great distances. They also said it would allow more productive interaction between teachers by reducing travel time between locations.

Secondly, they identified a role for technology in providing a common location to store data and lessons. Respondents said that offering a Web site with easily accessible and relevant information on the problems and challenges faced by new teachers would allow novice teachers to acquire information and solutions more rapidly than if they had to contact a mentor every time they had a problem or question.

Beyond these two notions of using technology to span distance and provide a common database for new teachers, respondents' views of how technology might contribute to learning communities were vague and unfocused. It will be crucial during the next phase of TLINC to communicate the transformational vision of the TLINC designers to local district and university officials to ensure they embrace this concept to create a formal and informal professional learning community involving their entire staff.

To do so will require that TLINC gauge local district and university officials' commitment to the changes required to build true learning communities first, and then consider the role of technology. Much of the work of the planning grant involved learning about processes and relationships that must be understood for TLINC to be valuable to districts and universities. In this first phase of the project, respondents said that resistance to such change – both in terms of the technology and the necessary adjustments in professional/social interactions – would be major obstacles to successfully implementing TLINC at the local level. Along with providing concrete definitions and practical examples of TLINC concepts, designers will need to work with district and university staff to demonstrate how its implementation will make teachers' practice more effective and less burdensome. In doing so, it will be critical for TLINC designers to understand the school improvement and change processes already at work in each district. They will also need to position TLINC as a vehicle through which the district can advance both short- and long-term goals. TLINC's successes and failures will be linked to its ability to garner commitment on the part of district leaders to the concept of a networked learning community as a solution to districts' challenges. A recommended first step for the upcoming phase would be a small-scale demonstration in each district on how the TLINC concept can meet a critical need related to teacher retention. Without engagement in the real work of the district, the TLINC project will be marginalized and will not take hold in the next round of test-bed sites.

II. Introduction

> *"Well-prepared teachers are the most valuable resource a community can provide to its young people. Thousands of communities across the country have responded to the Commission's challenge, by providing their children with highly qualified teachers who are supported with strong professional teaching environments. Their schools deliver an education that ranges from good to world class, and their students are achieving at high levels."*
>
> -No Dream Denied, NCTAF 2002

TLINC (Teachers Learning in Networked Communities) is only one component of a comprehensive plan developed by NCTAF (The National Commission on Teaching and America's Future) to assure that all students have access to competent, caring, qualified teachers in schools organized for success. The goals of the TLINC project are to reduce teacher isolation, provide increased support for new teachers, and create a professional community with schools that recognizes continual improvement of practice. More specifically, TLINC examines how technology tools and resources can provide teachers with the support and guidance that promotes effective teaching and increased levels of satisfaction of teachers.

The TLINC planning grant, funded by the AT&T Foundation, was designed to examine how communications technologies and networks could be used to develop and support professional learning communities. It sought to explore how online networks could connect teachers, higher education faculty, and district and union leaders in online workspaces that support teacher induction, and professional development opportunities. The goal was to create a continuum from pre-service to the early years of teaching. The TLINC design builds on research on teacher learning, communities of practice, and online learning to create a learner-centered, flexible, interactive approach to meeting the needs of new teachers.

The four sites selected for the first phase of the project were Seattle, Washington; Pueblo, Colorado; Socorro, Texas; and Portland, Maine. For a variety of reasons, including readiness factors related to technology and professional learning communities, only Seattle will move on to the second, more in-depth phase of the project.

The project addresses three critical needs identified in the research as important to teacher success: access to high quality teaching resources, frequent access to experts, and ongoing peer support. The national beginning teacher attrition rate of 46% after five years demonstrates that not enough is being done for the nation's teachers to help them deal with the challenges that ultimately lead them to leave teaching[i].

This report aims to use the data gathered from the first phase of the TLINC project to provide findings, readiness criteria, and recommendations for the next phase of TLINC. This report is based on the evaluators' participation at TLINC planning meetings and select site visitations; a review of artifacts including design templates, survey results, meeting notes; site reports; and data from phone interviews with nine respondents involved with the first phase of the TLINC project (see Appendix A). The respondents include two TLINC designers, three university teacher trainers or administrators, and one respondent from each of the four districts chosen during the first phase of the TLINC project.

During the second phase of the project NCTAF will work with a consortium of organizations and experts in the fields of teacher preparation, learning communities, and online learning, to study how a full implementation of TLINC accelerates (or decelerates): teacher retention within schools with previously high rates of turnover, progress of new teachers toward proficiency in curriculum and technology, sustainable learning communities, novice teachers' contributions to and benefits from their district's professional culture, and, ultimately, student motivation and achievement in those teachers' classrooms.

III. The TLINC Background Research and Prototypes

The 2003 national summit "The First Three Years of Teaching," provided a forum for NCTAF and its partners to discuss current trends in new teacher induction programs. Although increasing numbers of states and districts have instituted policies requiring teacher induction programs, most programs have not yet achieved the desired reduction in new teacher attrition and mobility.

The TLINC Project seeks to pilot a different approach, going beyond traditional mentoring. TLINC seeks to use technology to support teacher induction and learning communities that sustain novice teachers in rural and urban school districts. The research base on such an approach is sparse, and one of the goals of the TLINC program is to create "lab sites" where interested parties are able to observe what's possible through online learning communities. By creating the foundation for pilot networked learning communities, the TLINC project offers tangible examples of the fit between networked learning communities and teacher induction processes.

Given that the movement to transform schools into learning communities is relatively young, these pilot sites can serve a formative role in defining networked learning communities for a national audience. Thus far, while there is no strict definition of networked learning communities, there have been some initial models using technology for teacher induction and to sustain learning communities. There is general consensus in the literature that these communities share certain core traits. The five key traits to support schools' change to learning communities include:

- Encouraging teacher collaboration and differentiated staffing
- Sharing instructional leadership among teachers and principals
- Redesigning and downsizing schools into small learning communities
- Preparing new teachers in close collaboration with these schools and supporting their continuous professional development; and (particularly relevant to TLINC)
- Supporting the vision with technology[ii]

There are several nascent examples of networked or "distributed" learning communities that inform the TLINC project's efforts[iii]. One experiment in teacher learning communities across distance (without a face-to-face component) was created at Indiana University for math and science teachers interested in guided inquiry teaching. The Inquiry Learning Forum was created to support many types of professional development distance learning. The program uses tools ranging from video case studies to virtual communities of practice. Evaluations of the project indicated that is was effective, but could have also benefited from face-to-face interaction[iv].

A second prototype for networked learning communities is the Milwaukee Public Schools Professional Support Portal (PSP). This design for new teacher induction and retention is based on a distributed-learning community model. The PSP is designed to advance and accelerate the effectiveness of new teachers as well as to reduce their attrition. The Portal has created several learning tools to help new teachers, including: a curriculum design assistant, video case studies, and an online multi-user environment to build and sustain communities of practice. Large-scale evaluation of this project is underway. These are only two examples of initiatives that have guided to TLINC in designing models for distributed learning communities.

Although TLINC is focused on how technology creates new opportunities for building learning communities, the literature suggests, that at least in this transitional period, a hybrid model that combines face-to-face and online interactions, learning, and resource access is necessary. What the literature has yet to demonstrate are the specific aspects of professional learning and professional interactions within a learning community that are suited to an online environment.

IV. The Potential TLINC Test-Bed Sites: Readiness Factors

This chapter provides an overview of information garnered from each school district regarding their current usage of technology in teacher induction and professional development programs. It also summarizes the extent to which learning communities are serving educators in their districts. In most cases, the districts have thought about learning communities and how technology might be used to improve or create a learning community, but few of the sites have taken action on these ideas.

The information for this chapter was generated from the 2004 TLINC planning meetings, reports from those meetings, and from interviews in the summer of 2005 with TLINC project designers, district officials, and university teacher education staff in each of the four planning meeting sites. Below are brief summaries and excerpts from the NCTAF team's reports.

Portland, Maine

Like Seattle, Portland Public Schools is one of three *Strengthening and Sustaining Teachers* (SST) national sites. SST is a five-year initiative aimed at building and describing teacher-development systems to collaborate on the redesign of teacher preparation, new-teacher induction, and ongoing professional development. SST funding has provided Portland Public Schools (PPS) with the opportunity to strengthen its support system for new teachers. Mentors work with their new teacher for two years providing professional, instructional and personal support through orientation to the school and district, observations and feedback, weekly meetings, and teacher certification assistance. With the exception of a few schools, the program was scheduled to end at the conclusion of the 2004-2005 school year.

TLINC Design Team members conducted a limited needs survey with selected first, second and third year teachers, principals, district officials and mentor teachers concerning the needs of new teachers.[1] The following were identified as particularly critical needs for new teachers:

- Alignment between instruction, technology, and assessment.
- Guidance related to classroom management and organization, (e.g., discipline, organization of activities and communication).
- Having a mentor within same subject area.
- More time and supports, (e.g., more time to meet with teams, access to school-based professional development and access to timely procedural information).
- Administrator support.
- Access to online resources. Access to additional resources/online mentors and online experts/resources.
- Access to an online "marketplace:" a place for teachers to share ideas, swap lesson plans, work collaboratively on activities, and develop online lesson plans.

[1] Because of problems securing substitute teachers, TLINC Design Team staff was not able to meet with a larger focus group of new teachers and mentors as was the case in other TLINC sites.

TLINC Design Team members also met with a limited number of administrators, principals, and mentor teachers to discuss the needs mentors face as they work with new teachers. Needed supports indicated by mentor teachers included:

- Opportunities for both a combination of face-to-face and online mentors, so that ideas, concerns, and "best practices" and strategies can be shared.
- Online or face-to-face professional development to help mentors perform their mentoring role more successfully and effectively.
- The creation of professional development cadres, comprised of mentors and new teachers, with reciprocity of training and knowledge sharing
- Contact with other mentors outside their district
- Greater supports (release time, additional funds) to help them in their mentoring roles.

Portland Public School District and University of Southern Maine (USM) officials also expressed interest in building networked learning communities. Currently, like some of the other pilot districts, they use email informally, but there is no formal, established network for communication. The university offers online education options for its master's degrees that could serve as the basis for online professional development. Their current use of Internet tools includes the use of the Blackboard portal system for formal and informal online discussions among interns in their final stages of their teacher preparation programs. USM officials thought that TLINC could extend this concept to new teachers, essentially continuing this dialog as candidates graduate and enter their initial years of teaching.

A university-level respondent stated, "Teachers are overwhelmed with how to use resources that are available on the Internet." He felt that TLINC could be a tool to help teachers and teacher trainers use Internet resources more efficiently.

Like the Socorro Independent School District, Portland lacks resources. In Portland's case the greatest barrier wasn't funding, but rather the lack of personnel trained in technology that also understood how to create learning communities. One USM respondent commented, "We don't have that expertise in our teacher education department," adding, "being able to monitor and participate in an ongoing learning community with graduates of the program…would be helpful." But he qualified this comment that finding the time to do so is challenging. The discussion also brought up concerns as to the school district's openness to technology, in part due to their lack of reliable, robust technology infrastructures in many of their schools.

Discussions between the TLINC design partners and the Portland Public School and USM partners made it possible to explore ways in which Portland can improve its existing mentoring program, address new teacher needs, and begin to build, with the support of technology, a greater sense of community. The following strategies grew out of the TLINC discussions:

- **Build upon the strengths of the SST project**
  SST funding was due to end at the end of the 2004-2005 school year. But future development of TLINC activities could keep the momentum moving forward.

- **Gather additional data from Portland public schools**
  Gather more information about new teacher needs.

- **Work with existing resources**
  TLINC should begin with schools that have access to hardware, software and the necessary connectivity. This would include the elementary and middle school level.

- **Use student teaching opportunities to create school-based and school-university community**

- Since many of Portland's teachers have matriculated from the University of Southern Maine, create opportunities for master teachers to work together and with teams of student teachers (e.g., practicum experience).

- **Migrate from the one-on-one model of teacher and mentor toward a team-based approach**
  A team-based approach in which teams of mentors work with teams of new teachers would stand a better chance of addressing the myriad personal and professional needs of new teachers.

- **Use communication technology to provide online supports to supplement face-to-face human interactions**
  Communications technologies can offer an array of supports to new teachers, expanding their knowledge base beyond the confines of their district.

Although three of the four phase one sites will not be continued in phase two, even those that were not used provide instructive data to the project team. One of the crucial lessons the team learned was that even districts that are open and interested in improving teacher induction and building learning communities are not ready for a project like TLINC unless they have a strong technology infrastructure and some aspects of professional learning communities already in place. Nevertheless, now that we know the issues that the phase one sites are facing, once TLINC is successfully implemented at the phase two sites, the models can be more easily adapted to other sites. So, the team expects to cycle back to some of the communities in the near future as TLINC progresses.

<u>Pueblo, Colorado</u>

The school district's relationship with the Colorado State University-Pueblo holds potential as a core component of the online learning community. University faculty were active participants at the planning meeting and it was evident that their relationship with the district was positive.

The induction program at Pueblo District 70 is run through the Southern Colorado Education Alliance (SCEA), with partnerships from Colorado State University serving several districts in Southern Colorado. While the current program is running smoothly, there seems to be little support for new teachers beyond the first year.

Like all of the sites, Pueblo District 70 officials said they would like to integrate technology into their professional development and induction programs. "There is a lot we would like to utilize," one district respondent said. "We would like to use some chats and blogs so that teachers could communicate and use online courses. We don't use technology now for professional development, but we need to, we know that." Two

planning sessions were held in Pueblo. District leaders felt that the second meeting was the most helpful, in part because at that meeting the NCTAF design team demonstrated the technologies that could be used to support a learning community.

While the Pueblo district respondent said that the TLINC planning meeting was very helpful and "made the district look at their induction process and make some changes," the district's conception of a learning community remained unfocused. A major goal of the second phase of the TLINC project should be to define specifically what networked learning communities are, providing multimedia demonstrations and examples. As one Pueblo district official said, we are, "just establishing what a learning community looks like." Like many of the other districts, Pueblo has a mentoring program in place, but little in the way of true learning communities.

The planning meeting notes also indicate that the district is interested in developing better support for teachers in their first three years of service and more collaboration and sharing among all teachers. The district seemed particularly interested in using technology and one respondent said that CSU-Pueblo representatives were "ready to go" in terms of using technology to build a learning community. Despite this positive orientation toward technology in teacher induction and professional communities, it seems the district is not using technology extensively for these, or other purposes.

The planning group generated a list of concerns related to the TLINC concept:

- Is the current district technology network adequate to support a professional learning community?
- Could teachers discuss student work online?
- Would discussion boards be used by new teachers?
- Would they see them as one more draw on their time?
- Would the new teachers be comfortable using the technology to communicate and find resources?

The key issues they identified as critical for building a networked learning community included:

- Developing a stronger induction process
- Developing capacity among teachers (social capital)
- Deploying a robust technology infrastructure

The challenges they identified in their current new teacher induction program included:

- The need for a longer period of "community" support for new teachers
- Lack of deep discourse about teaching issues within and across departments/grades
- The idea of a "shift to learning communities" is amorphous and hard to grasp
- Teachers feel they will be judged if they look for help

Because the district encompasses a large geographic area, the potential of technology to span the distances between teachers and cut down on travel time for professional development was particularly appealing to Pueblo district officials. The district expressed a desire to increase communication between beginning teachers and district level staff but currently their teacher induction process drops off after the first year. No formal recommendations were developed in the Pueblo District 70 meetings or in the Seattle Public Schools meeting.

Seattle, Washington

Seattle Public Schools (SPS), the University of Washington Schools of Education and Arts and Sciences, and the Seattle Education Association (SEA) are transitioning from the *Strengthening and Sustaining Teachers* (SST) project to a much larger and more complex teacher support endeavor, the *Teachers for a New Era* (TNE) project. This is a collaboration between the University of Washington, Seattle and Seattle Public Schools.

One of the key readiness factors within Seattle is the close fit to the goals of the new teacher induction program, *Teachers for a New Era* (TNE).

Three primary design principles guide the TNE program:

1. A respect for evidence, including attention to pupil learning gains accomplished under the tutelage of teachers who are graduates of the program.
2. Engagement of *faculty in the arts and sciences*
3. Teacher *education as a clinical practice profession,* requiring close cooperation between colleges of education and P-12 schools; master teachers as clinical faculty in the college of education; and residencies for beginning teachers during a two-year period of induction.

The partners in the TNE project recognize that to achieve their goals, a robust and scalable technology infrastructure must be established to support communication among students and their support providers, collaborative learning activities, and enable learners to view and analyze classroom practice.

Of the four TLINC planning sites, Seattle was the most prepared for building networked learning communities into their teacher induction and professional development programs. Seattle Public School (SPS) officials were already thinking of how they could improve their face-to-face new teacher mentoring program with an online component. Seattle officials commented, “The mentors themselves have been involved in thinking about what this online professional community would mean to them…and the additional support that would be given to the teachers...”

At this point, Seattle officials are focused on two uses of the Internet to improve their teacher induction and professional development regimes: online communication to cut down on time lost for traveling, and consolidation of information in one place on the Web for easy access by teachers.

One district official said, “A lot of the mentors’ time is spent gathering resources to support the work of the beginning teachers.” In order to create a more efficient source for new teachers to use when they have questions, Seattle district officials have considered creating an online resources bank with relevant lessons and assessments.

University of Washington, Seattle and Seattle Public School officials were interested in the SRI-developed technology tool “Tapped In.” Tapped In is a Web-based learning environment created to transform teacher professional development. Respondents felt that Tapped In might help the TNE project’s need for a generic communication and support environment. One of the university staff conducted a series of demonstrations for representatives of the TNE community. Officials from the University of Washington and Seattle Public Schools are also considering using an online tool called “Video

Traces" that allow novice teachers, university faculty, and mentors to use online video and multimedia effects applied to real filmed lessons, for the purpose of examining and reviewing class lessons. Integrating Tapped In and the Video Traces online instructional tool into TLINC will be one of the tasks for phase two of the project.

During the TLINC planning meeting, participants shared their experiences using online tools to communicate with mentees, find resources, share files, and engage with a "wider community" outside one's school or district. Technical issues and user expertise were cited as contributing to the lack of participant use of online technology. The role of community coordinator/organizer was seen as essential for understanding and satisfying the needs of the participants. They stated that technology must support the activities of the organizer as well as the learners and support providers. Respondents said that in order for a TLINC concept to work in districts and universities there would need to be staff whose primary role is facilitating the professional learning community. According to respondents, this community cannot be sustained by part-time staff with a multitude of other responsibilities beyond building and sustaining the learning community. Advancing the evolution toward a learning community takes too much effort for officials with other major responsibilities.

The nature of the TLINC environment was also a topic of discussion in Seattle—how to ensure that the TLINC environment provides a "safe" place for a community of new teachers. For example, respondents said they would like a space where they could vent and share bombed lessons as well as successes. How to provide similar environments for the other communities, such as the mentors, was also discussed.

The other needs that an University of Washington/Seattle Public Schools online support system should address included:

- Promoting collaborative inquiry around student learning
- Supporting mentees' emotional, technical and standards-based needs
- Providing authentic roles for partners (A&S, SPS, SEA, COE [what do these acronyms stand for?])
- Piloting before going for large scale implementation
- Integrating new teachers into the larger school community
- Providing avenues for connecting both within the school and to the larger school community,
- Integrating shared wisdom to create a knowledge-building community
- Offering opportunity to see what successful teaching looks like (e.g. video clips)

The participants expressed several concerns and challenges, including:

- How will leaders know what new teachers need? How will they know what they need? Online activities must satisfy a perceived need.
- How will participants find the time? Why should they make is a priority? What are the incentives and rewards?
- How will working online become part of the culture and thus be sustainable?
- How will they find the right balance between face-to-face and online activity and assure that online activities increase efficiency and productivity?
- How will participation improve instruction and student learning? How will improvement be measured?
- How will avoid being just another project and instead become sustainable by SPS?
- How will new online tools mesh with existing tools?

- What support is provided for administrators?

Socorro, Texas

Socorro was selected to become one of the four districts in the AT&T Foundation funded planning grants for the TLINC project because of its strong leadership, partnerships developed under the University of Texas El Paso Collaborative for Academic Excellence, and evidence of high need. The district has a growing teaching force serving a large numbers of students with academic and social challenges.

Socorro students often come to school with a host of challenges due to poverty and linguistic isolation. Because the needs of students are both socioeconomic and academic, a qualified, stable teaching staff is of paramount importance. Further, because of the low property tax base, the District simply cannot afford to lose teachers. Using a conservative multiplier of .25 to calculate replacement costs associated with teacher attrition (Texas Center for Education Research advocates a replacement cost multiplier of 1.75) the District estimated a loss of $1.3 million in direct and indirect costs associated with teacher attrition at the end of the 2003-2004 school year.

In June 2004, Socorro initiated a teacher mentoring program in which school-based veterans serve as mentors to first-year teachers. The mentoring is a mixture of formal (e.g., a one-day Saturday meeting, some formal classroom observations) and informal (classroom visits) between mentors and mentees.

To attract, train, and retain highly qualified teachers, the District plans to:

- Increase the number of professional development days (based on teacher need)
- Expand responsibilities for teacher induction at the district and school levels (be clear on expectations)
- Improve district and school-level mentoring
- Add an evaluation component
- Expand the base of support for mentors and mentees (and add 2 more years to program)
- Expand options for professional development acquisition (explore different formats)

District staff from the Socorro Independent School were interested in building learning communities with technology, but their primary concern was funding. They said they would “need to seek outside funding to implement it fully”. In Socorro, like all the other districts, networked learning communities were much more of a vision than a reality. District respondents identified several uses of technology that would be advantageous to their district including building staff development web sites where teachers could go for help and using the Internet to host virtual professional development meetings. These goals were in line with the visions outlined by the other three districts.

One district official said in spite of the desire to upgrade the teacher induction and professional development that, due to a lack of funding, there were no technology changes planned in the near future. Despite the lack of technology, there was a nascent professional learning community present at Socorro. The mentoring program involved formal classroom observations, Saturday meetings, and information visits among

mentors and new teachers, but lacked engagement in professional learning communities beyond the mentor-new teacher interactions.

Like the other four districts, Socorro enjoys a close working relationship with a pre-service program in a nearby institution of higher education, in this case the University of Texas, El Paso (UTEP). Some university staff expressed enthusiasm about using technology as part of the university teacher training and professional development but said that this idea has not been explored systematically. One university respondent said that most resistance to using technology and implementing learning communities came from principals in the district. He also said that there are professional learning communities of a sort at UTEP's teacher pre-service training. He referred to the online courses that student teachers take in which they use the Web to communicate and share work with the instructor and fellow students. The respondent said this served as a sort of a bare-bones, temporary learning community that dissolves at the end of each semester.

This professor said that pre-service teachers take many of their courses online and communicate online, however these communities end after each semester and are not sustained into the next course, let alone into the school district after the student begins teaching. This respondent said that the district still needs to undergo "a paradigm" shift. "They need to see that online education actually produces a better product," he said. It was evident that from the visit in Socorro that the district superintendent recognizes the value of a professional learning community for teachers and administrators. This could serve as the seed for expanding the new teacher induction program beyond its traditional mentoring model.

Based on TLINC work with Socorro, our conversations with new and veteran teachers, building and district administration, the design partners recommended the following strategies:

- **Reward all mentors with additional pay, reduced workload and/or other incentives**
  Volunteer mentoring raises all sorts of accountability and quality issues.

- **Provide in-depth ongoing instructional training to mentor**
  Mentors need assistance in learning how to help teachers become successful in terms of instruction, curriculum design, lesson planning and classroom management.

- **Use student teaching opportunities to create school-based and school-university community**
  This would create some sense of continuity between university pre-service programs, teaching practica, and teachers' first year experience. It would also introduce both master (mentor) teachers and novice teachers to a school-based community.

- **Migrate from the one-on-one model of teacher and mentor toward one that is team-based**
  The formation of school-based communities is integral to teachers' adopting, internalizing and systemizing new innovations.

- **New teacher supports should be extended to teachers from years two to five and these supports should be tiered**
  Because new teachers' needs evolve in a developmental fashion, novice teacher support must be ongoing, developmental and cumulative.

- **Use communication technology to provide online supports to supplement face-to-face professional development and mentoring**
  Communications technologies can provide a valuable tool in support of the previous five recommendations.

For example, providing a laptop to mentors could be one incentive that makes mentoring more attractive to veteran teachers. (Recommendation 1) An online community can be the vehicle that provides training and continuing assistance to mentors so they can learn from colleagues and grow in their mentoring expertise. (Recommendation 2). Similarly, the online community linking pre-service and district supports to teachers can facilitate the creation and support of the "learning loop" that goes back and forth across the P16 support systems. (Recommendation 3) Recommendation 4, which advocates moving toward team-based approaches to mentoring, can also be facilitated through networked collaboration, online study and collaboration among the teams. And the online network can easily grow and evolve with the developmental needs of teachers as they progress from student teaching and internships on the first, second, third and continuing years of teaching beyond the provisional level. (Recommendation 5)

V. Lessons Learned: TLINC Essentials

The district planning meetings and interviews with key respondents generated a variety of relevant lessons learned that will be useful to program in advancing the next stage of the TLINC project. Cited below are the major lessons learned from the first phase of the TLINC project.

1. ***Online mentoring supports new teachers as individuals; networked learning communities induct new teachers into a supportive, collaborative profession – the difference between these two approaches is significant.*** *In fact, traditional one-to-one mentoring, when viewed as the sole induction focus, can be a barrier to building a true networked learning community. This dependence on one teacher helping another teacher can be an important component in providing some forms of support, but it is unreasonable to expect one teacher to meet the varied social, emotional, and instructional needs of a new teacher.*

All of the four school districts have some form of mentoring program for new teachers. Across the districts, respondents seemed to equate networked learning communities with improving their mentoring programs. As one TLINC program designer said, "The hardest thing for them [district and university officials] to see is that mentoring might be in the way of building communities."

Interviews with respondents in all districts confirmed this concern. "Learning communities" were not well understood in most of the districts. If an insufficient introduction is given to the idea of networked learning communities, there is a risk that the TLINC phase 2 districts will also focus on expanding or improving their existing one-to-one mentoring programs as the best way to build networked learning communities.

Although mentoring is not inimical to building networked learning communities, one TLINC design respondent said that, "a high dependence on mentoring fosters a sense of a transfer of learning from a master teacher to a novice teacher with the notion that you do it alone. You want to make sure that mentoring is fostering the community approach as opposed to encouraging a notion of 'getting all the tricks down and figuring out what to do so you can work in your classroom along.'"

2. ***The "tipping point" for TLINC is local recognition of the potential the networked learning communities represents to the advancement of district goals that leaders perceive as high stakes***

Key to the success of TLINC is the belief on the part of school leaders that it has the potential to advance key district goals. If the TLINC concept can address some needs and provide resources of value to some groups, it would be an important first step. Thereafter, it can build toward supporting a large and deeper learning community.

3. ***Three key online components identified as valuable for effective new teacher induction include:***
    a. *A **common 'market place'** for formal and informal collegial interactions, sharing and exchanging of materials, resources, and ideas*

b. ***Access*** *to professional development, resources, mentors, partners, and experts*
c. ***A meeting place*** *for formal discussions on the business of teaching, learning, leading, and administration of schools*

4. ***In general, university teacher training partners in each of the four sites had more experience and were at times more enthusiastic about using technology in learning communities than were their K-12 partners***

One respondent cited an example of the higher level of experience and enthusiasm that universities had with online learning communities: "the folks at the university [CSU Pueblo] were ready to go. They really recognize the value of online communication and online knowledge sharing. The feeling at the university is very pro-technology."

The districts' university partners often provided the most experienced and enthusiastic voices regarding building collaborative networked learning communities. At the University of Washington, Seattle, however, one respondent said, "Small cadres in UW and district recognize technology but this recognition is not widespread." In most other districts, university level staff already had experience in administering online courses that included discussion among students and sharing of students' work. This experience and familiarity with some of the basics of using technology in a learning community provides valuable intellectual capital for many of these sites.

This was also seen among respondents from the University of Texas, El Paso (UTEP) who were partners with the Socorro Independent School District in Socorro Texas. "I love the TLINC concept, I think the future is there," one UTEP respondent said. According to this respondent and others, several of the pre-service programs for teachers incorporated online learning activities that approximated the characteristics of professional learning communities, but these processes were not carried over into the district once the student teachers graduated. "Most teacher preparation classes have enrichment components that consist of posting information online," one Socorro respondent said. He also said that students in UTEP's teacher training program are grouped in cohorts of 20-30 people and go through the program together. Particular professors are also tied to each cohort, facilitating the building of small communities among students. Building a system to create continuity between the incipient networked learning communities in the university teacher training departments and the districts where they are inducted is a key challenge and opportunity for the next phase of TLINC.

In Portland, Maine, the University of Southern Maine also has online courses and email links among students in the teacher training program and graduates. Meanwhile, Portland Public School District was dealing with a substandard technology infrastructure--particularly at the high school level—although the district does have some schools that demonstrate highly effective uses of technology for learning. While technological expertise is a prerequisite, all parties have not yet acquired the expertise in networked environments AND communities of learning that together will ensure success in this arena.

5. **Many district and university participants in the TLINC planning meetings lacked a full understanding of the concept of professional learning communities**

Some district staff and university faculty had not yet grasped the extent to which networked technologies could be used to increase the potency and range of learning communities. Respondents reported that, unless experienced firsthand, it is difficult to understand what a learning community is, how it functions, and what value it adds to the teaching profession and to learning in general. Thus, the building of a learning community may require stages of growth, allowing participants to learn incrementally how it might be leveraged to advance district goals. Without a common vision among district, university, and TLINC designers regarding the goal of the project, it will be very difficult to achieve in the pilot sites. “In order to build learning communities you really need to have a different form of leadership,” one TLINC designer said. “You have to have an understanding of how important it is for teaching to be a collaborative enterprise.”

There seemed to be a gap between the ambitious goals of the TLINC designers to create a collaborative teaching and learning process, and the vision of many district staff. District officials’ vision was more practical and often involved simply using technology to upgrade the mentoring program and putting teaching resources online. Officials in most of these test sites are only beginning to understand what a networked learning community is even after the planning meetings.

Although most of the district and university staff said they were generally open to innovating and improving their teacher induction and professional development processes, they had not yet determined the specific directions that they wanted to take these programs.

6. ***For networked learning communities to be implemented, school district and university partners must have the requisite technology infrastructure in place or commit to deploying and maintaining such an infrastructure***

Although this notion seems obvious, in many of the pilot sites, the district did not have the necessary technology infrastructure to even begin to think about building networked learning communities. “Reliable access and technology support are fundamental,” one TLINC program designer said. “And access has to extend to the home for teachers. Home access is perhaps more important when it comes to a teacher network or a teacher community.”

In some cases, districts were sophisticated in the uses of technology in general and in particular with its use in teacher training and professional development. This was the case with Seattle, where district officials were privy to some of the latest uses of online learning for professional development and building community among teachers. According to respondents, this district already has a strong technology infrastructure that could be adapted or expanded for use as the building blocks of online professional communities.

But this level of sophistication with technology was not common in the other districts. In Pueblo District 70, one respondent said, “They are very busy just getting technology up and running in the schools. In many cases teachers and district leaders do not understand the goals of professional learning communities and technology.”

In the Socorro Independent School District, in response to questionnaires and focus groups held with teachers by the project design team, respondents said that all teachers have computers in their classroom but that their goal is to provide all teachers with laptops. “We can’t make the assumption that teachers have access,” this respondent said. “And we can’t assume they have training in technology.” In this district, the respondent said she was not expecting any changes in the technology infrastructure because of funding, but they are hopeful that they will find outside external funding and upgrade the district’s technology.

Improving a district’s technology infrastructure and orientation toward learning communities requires leadership. As one TLINC designer said, “There has to be person whose job it is to see education as a collective enterprise: someone who moves between classrooms who carries the knowledge from one teacher to another teacher, someone who facilitates the group meetings, who works on helping teachers with diagnostic assessment about students.”

7. ***Relationships and alignment between school districts and local teacher education departments varied greatly among the four test sites***

Relationships among teacher training faculty, district officials, principals and teachers varied between districts and each site demonstrated different levels of cooperation. The nature of these relationships is relevant to how projects such as TLINC are implemented, one TLINC designer said. “Universities tend to have the grants and therefore tend to control things including the funding. When it comes to a teacher network, the locus of control needs to be in the district, not the university, but it’s a hard thing to do.”

In some cases, relationships between school district leaders and teacher training departments were close and productive – e.g., CSU-Pueblo and the University of Washington, Seattle. In other cases the relationship between the university and school district was weaker in the sense that personnel from one or both of the institutions were not involved to the necessary extent in the induction process or with integrating technology into the professional development process. The fact that incipient learning communities are not being transferred into districts demonstrates the lack of alignment and strong relationships between districts and universities.

8. ***Respondents from the school districts and the university cited factors from several different groups as being resistant to networked learning communities***

One respondent said that principals are the key to TLINC’s successful implementation. “Principals need training and understanding…not only in the technology piece. We need to do a better job of educating them about how you induct a teacher in your school.” In other cases, respondents said that district leaders such as the superintendent were the most important leverage points to implement TLINC in districts. “Key district leaders have to support it and say to teachers, we encourage you to participate and …we are giving you good access to technology.” This respondent said that district leaders should reward teachers with professional growth credits for making the changes needed to build networked professional learning communities.

Several respondents agreed with this analysis of integrating TLINC into schools. “The higher up you get commitment, the more likely that you will get a sustained program,” one respondent said. “In the first few years of this [programs like TLINC] the high-level support is very necessary, but over time it does become a more grassroots driven type of thing.”

Among university respondents, most also said that the provost or dean of the education school needed to be persuaded to implement changes that would facilitate networked learning communities. Some respondents also mentioned professors. “You have to find ways for tenure-track professors to value technology,” one respondent said. This respondent said that professors are busy and would need significant motivation to spend the energy and time needed to change their ways of doing business.

In Seattle respondents said that “education directors” that supervise principals would be the most important group to involve in TLINC. Each of these directors supervises 18-21 principals. Other respondents stressed that the technology department at districts was a key component to ensuring TLINC’s success.

Predictably, several respondents said that teachers are a key constituency for TLINC and one that is often hard to change. “It’s the mindset of teachers that teaching is a private enterprise,” one respondent said. “It really takes a change of focus.”

VI. Getting There from Here – Effective Change Models

At this point, the T-LINC model of achieving higher teacher retention through networked professional learning communities is still only informed conjecture. This early phase was limited to exploratory discussions and planning with universities, colleges, and K-12 schools in the four communities.

The meetings and interviews with respondents provided TLINC design partners with insights into:

- The lack of cost effective, multi-year models for new teacher induction
- The range of opportunities that could be afforded to all teachers through networked communities
- The technical challenges in providing an adequate online environment
- The lack of awareness of what a TLINC environment is, how it would operate, and what value it would bring to new teacher induction and teacher attrition

Phase 1 of the TLINC project clearly demonstrated the challenges ahead—technically, politically, and philosophically. TLINC success will depend on the unpacking of these challenges to reveal potential benefits, linkages to high stakes outcomes, and impact of beliefs, values, and attitudes about professional learning communities on the experience of all teachers, new and experienced.

Listed below, in detail, are the pre-conditions respondents identified as essential to the success of the TLINC model in their districts.

Pre-requisites for Implementing the TLINC Change Model

1. Strong University-School District Partnerships

Building a linked transition from the pre-service milieu for teachers to the early in-service years is a key provision of TLINC. The seeds of university-district cooperation were found in several of the study sites. Although Socorro, wasn't selected for the second phase of the project, there was discussion regarding how the district and the University of Texas, El Paso could identify master teachers within each school and allow them to serve in classrooms where student teachers are placed for their practicum experience. These same classroom master teachers could also serve as mentors to these new teachers when they return to the district as full-time novice teachers. This link between the pre-service university environment and the early in-service environment would form an incipient professional learning community linking both organizations. Furthermore, it would create a sense of continuity between what is learned in university pre-service programs, teaching practica, and teacher's first-year experiences. Also importantly, it would introduce both master teachers and novice teachers to a school based community.

But in other sites, it was evident that there was a lack of agreement between the district and universities on matters central to TLINC, even among institutions that had relationships spanning decades. In the Portland, Maine site, university-level respondents said that the district has been "dragging their feet" in terms of partnering with the University of Southern Maine (USM) to build networked professional learning communities. According to respondents, key district leaders do not see TLINC (or

technology in general) as a priority and thus are unwilling to partner on this project with their more enthusiastic counterparts at USM. “At the district leadership level there is no vision on the use of technology,” one USM respondent said. Other respondents said that in some cases district staff cannot see out of their day-to-day needs in order to grasp the full potential of TLINC, or a TLINC-like project.

Other respondents stated that grants such as TLINC are often housed at universities and therefore they often have control over project activities even if the main arena of action is in the district. This can prevent a true partnership from forming and create a dynamic of university level staff bestowing their knowledge, skills, and abilities upon the district with the district acting as the receptacle for information. Respondents stressed that projects dealing with teacher networks must be housed in the district and not at the university. Given the occasional disagreement seen among the university and district respondents, this will be an issue that the TLINC second phase sites will need to address early on.

2. System alignment

“System alignment needs to be in place to have anything like this work,” one Seattle respondent said. “People…need to have a common understanding of why this is important and what we hope to accomplish.” This respondent said that the challenge is moving beyond the district talking up the importance of TLINC and actually making it a first-rate priority among the district’s many other priorities. “Everybody thinks it’s important, but finding the time and space is difficult,” the Seattle district respondent said. “There is always another priority.”

This respondent said that part of making professional learning communities a priority is defining learning communities and making them tangible to staff. “The term is tossed around a lot,” the respondent said. “But unless you have experienced it, it is hard to be supportive.” This will be a real challenge in the second phase of the TLINC program because actually moving toward networked learning communities implies a system-wide “paradigm shift” as one respondent stated. Thus, NCTAF’s strategy must include finding the fit between the potential of networked learning communities and a high stakes learning goal that can be accomplished through TLINC.

3. Strong technology infrastructure

Clearly, in the second phase of the project, districts should already have a strong technology infrastructure in place if the TLINC program is going to have an impact. Respondents indicated that use of technology for learning communities is more common among pre-service teachers and that this might be a good place to try to extend and sustain these links for teachers after they enter the districts. “If teachers use online technology in the context of a teacher network in their pre-service program then it becomes a no-brainer to take it into the schools with them,” one respondent said. “If you have to develop the online skills and the disposition to go online then it becomes harder.”

Districts and universities that already have sufficient technology and are using them to even a minimal extent for communication and community among teachers offer a

stronger staging ground for TLINC than districts that lack their attributes. In addition to the technical and social infrastructure, it is also helpful if a district has personnel willing to manage the network and to make sure that it is meeting the needs of teachers.

4. Strong incentives for district staff and university teacher training departments

Even with a strong technology infrastructure and buy-in from varied levels of the district and university bureaucracy, if teachers and teacher training faculty are not offered incentives to participate in a networked learning community, it can be difficult to embed in districts. This includes shifting how teachers are judged and assessed as being successful. One respondent stated how the current incentive and reward system reinforces an individualistic mindset to teaching that runs counter to the outlook needed for TLINC to flourish. “We are in effect using test scores and teachers’ performances to suggest that everyone should be in competition with everybody and that stands in the way of building communities,” the respondent said. “[In this case,] I have no incentive to share what I am doing with another teacher because then he or she will start to do as well as me and I will start to lose my footing.

This respondent also described a more communal outlook that would help the TLINC project in districts. “If what you get credit for is your grade level or your school and if you identify with the larger unit then new teachers can begin to feel like they are part of something worth fighting for,” the respondent said. Given teachers limited time, these types of incentives are crucial to motivating staff to make the changes in their practices that would facilitate TLINC.

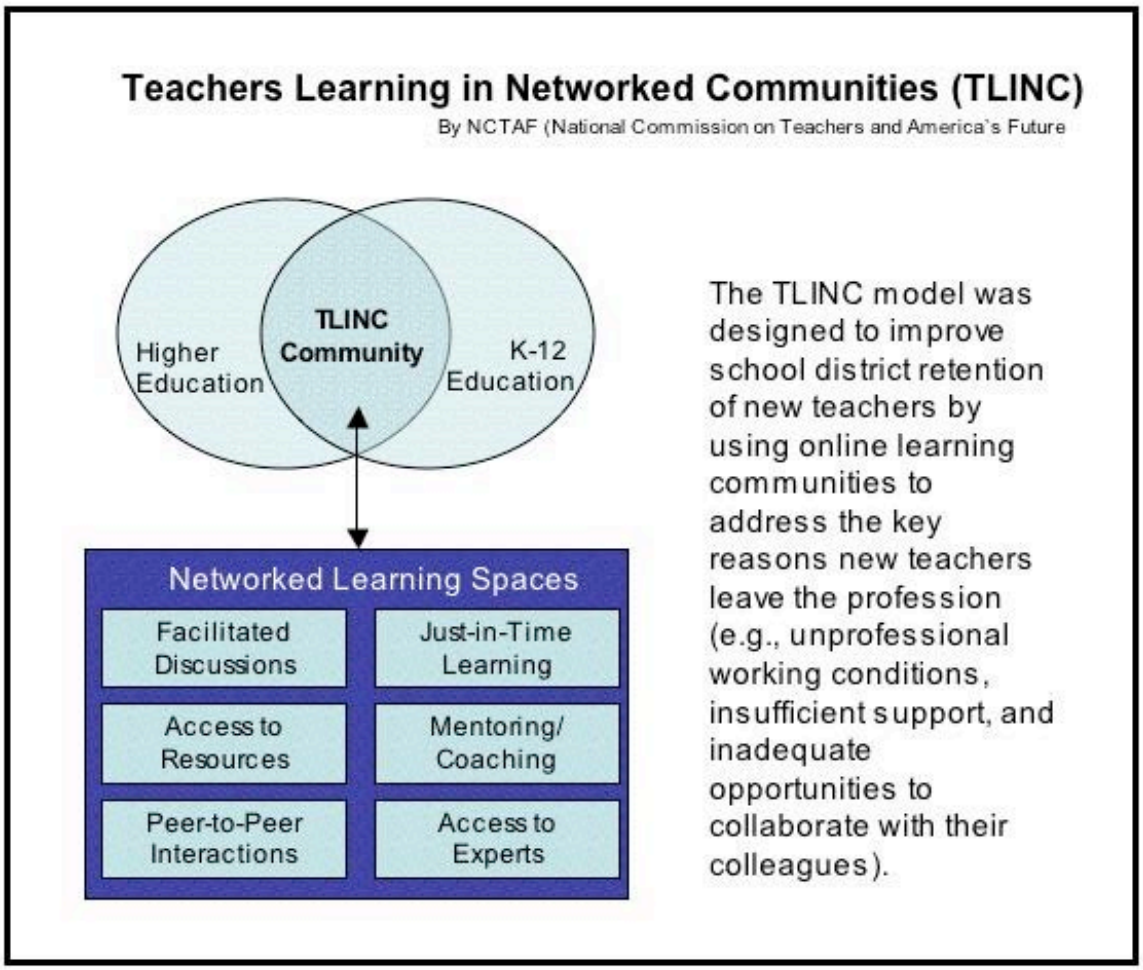
Creating a new incentive structure is also necessary for the university-level teacher training staff involved in this project. Without clear and strong professional incentives for professors to become involved and sustain involvement with TLINC it is unlikely that they will maintain consistent involvement.

5. A different mindset on the part of educators

The importance of gaining teachers’ buy-in to professional learning communities cannot be emphasized enough. “Right now, most of the time, when you encourage a teacher to work in a community, they are worried about assessment, worried that they might be judged,” one TLINC design respondent said. “They have the feeling that if they are competent, they should be able to operate without other people and see asking for help as a lack of expertise.” Focusing on changing this deeply embedded outlook among teachers will be crucial to ensuring TLINC’s impact.

A model emerged from phase 1 that sheds light on what networked learning communities are, what role they could play in teacher retention, and the conditions necessary for successful implementation in interested K-20 communities.

A Model



The TLINC model provides opportunities for teachers, administrators, higher education faculty, and pre-service teachers to join an online learning community that expands opportunities for interactions locally, expands access to indexed resources, and expands interactions beyond their local community.

What Are the Indicators of Change and Success that Districts Are Seeking with TLINC?

There was remarkable consistency in terms of what indicators school districts would pay attention to in measuring the success of TLINC. These two main indicators are: changes in teacher retention and student academic achievement. Although these are the two broad areas in which districts would like to see increases, the details of how each district would measure ways in which TLINC advanced those goals varied. In Seattle, in addition to tracking retention, district officials said they would also be interested in measuring to what extent a networked professional learning community kept teachers in their own buildings rather than transferring to the "non at-risk" schools in the district.

In other districts, respondents said they would measure TLINC's success by the extent to which new teachers felt they were supported and knew where to go when they needed help. "We would measure the success of TLINC by determining if there was less frustration at the end of the year," one respondent said. Other respondents had much more specific criteria for measuring TLINC's success. "The first criteria would be the availability of the electronic mentor," one university-level respondent said. "The first question would be: is my mentor available when I need help and what is the turn around time from the moment I need help to the time I get it?" The respondents thus identified trust and the availability of support as key parts of a successful professional learning community.

Another way to measure the impact of TLINC according to respondents would be for student teachers who are using it to feel, "I am being helped. I truly feel that this worked." Respondents said that TLINC should produce concrete progress and should not just be measured on the extent to which it provides moral support to student teachers. Respondents said that another way to measure TLINC's positive impacts would be the "degree of increased self-direction and decreased dependency among teachers" as time goes on. Like most respondents, one university level official said that the ultimate criteria for TLINC's success would be "Did the students do well and did the beginning teacher decide to return" to the district?

Although there was significant consensus on what the TLINC indicators of success, measuring such success was more complicated, according to respondents. Various respondents mentioned a variety of measurement tools and approaches. "In a formative way, I would look at social network analysis to look at the social interactions among teachers," one respondent said. **Social network analysis** has emerged as a key technique in modern sociology, anthropology, social psychology, and organizational studies. Research in a number of academic fields have demonstrated that social networks operate on many levels, from families up to the level of nations, and play a critical role in determining the way problems are solved, organizations are run, and the degree to which individuals succeed in achieving their goals The same respondent stated that analyzing interactions between teachers and the district and among university participants would also help provide a comprehensive picture of what was happening in and among schools and their university partners.

Many respondents considered using pre and post surveys to measure such attributes as teacher satisfaction with their jobs, access to expertise, retention, and their impact on student achievement. One respondent said a comparison between student

performances in schools that are part of a professional learning community versus traditional isolated classrooms might demonstrate the impact of the TLINC model. As the learning communities become more embedded in districts and universities over time, this model of analysis could prove to be an effective evaluation indicator.

One TLINC design respondent described succinctly the combination of indicators that TLINC would seek to influence. This respondent said that an evaluation of TLINC would measure “some combination of how students were doing in student learning and the degree to which you saw consistent teaching across a grade level.” She also said that some best practices shared throughout schools, stating it would be important to measure, “the degree to which you saw consistent teaching across grade level. You would want to see that there was some influence of the collaboration across teachers teaching the common content.” The respondent also said she would be looking to build school capacity.

Because school districts were focused on increases in new teacher retention, their expectation was that TLINC would address the key factors that cause new teachers to leave the profession, (e.g., unprofessional working conditions, insufficient support, and inadequate opportunities to collaborate with colleagues).

Work conducted in the exploratory planning grant suggests that further implementation of the TLINC model should track success on three sets of indicators:

1. Teacher retention and/or mobility
2. Shifts in teachers’ satisfaction with the working conditions, levels of support, and opportunities for professional collaborations
3. The nature, quality, and extent of online professional interactions among teachers, faculty, and other educators

VII. Next Steps

The first planning phase of the TLINC project provided useful, actionable data for advancing the project during the next phase. The evaluators recommend that the next stage TLINC implementation work:

1. Acknolwedge the alignment between the districts' teacher retention model, perceived challenges, and the opportunities available through networked communities
2. Conduct partnership meetings at which background information is presented, shared visions are established, and roles and responsibilities are discussed
3. Analyze the readiness of school districts prior to implementing TLINC
4. Assist the district and university/college in establishing common TLINC goals, milestones, and progress indicators related to TLINC/Teacher Retention
5. Involve the local technology teams in a plan to bring the online learning space into the district. Provide technical support to establish teacher/faculty entrée into the online learning space
6. Automate and collaborate on the collection of data in ways that reduce the burden on teachers
7. Facilitate a plan of action for incremental introduction to and use of the variety of online resources, tools, and learning/communication opportunities

Lessons from Phase 1 would suggest that, in order to achieve success with TLINC in the near term, districts must have a strong existing technology infrastructure, a history of strong connections between the university and the district, and evidence of some basic characteristics of professional learning communities.

Once districts are identified that exhibit the criteria cited above, more work will be needed to develop project evaluation criteria and indicators.

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[i] National Commission on Teaching and America's Future. 2003. "No Dream Denied: A Pledge to America's Children". Washington, D.C.: National Commission on Teaching and America's Future

[ii] Ibid.

[iii] Dede, Chris. 2003. "A Call to Action for the National Commission on Teaching and American's Future: Enabling Distributed-Learning Communities for Educators Via Emerging Technologies." Washington, D.C.: National Commission on Teaching and America's Future.

[iv] Barab, et. al. 2001. "Designing and Building an Online Community: The Struggle to Support Sociability in the Inquiry Learning Forum," *Educational Technology Research and Development.* 49(4) pp.71-96.

Appendix A – Survey Instruments and Focus Group/Interview Protocols

TLINC PHASE I TEST-BED SITE TEACHER SURVEYS

Pueblo, Colorado

Below is a copy of the survey instrument used at the **Pueblo, Colorado**, Phase I TLINC test-bed site. This survey was used to get general background information on teachers and specifically to look at their use of technology. They survey was conducted with new elementary school teachers. A similar survey was conducted with mentors in this district

T-LINC Teacher Survey – Pueblo Unified
August 04

School:

Grade level(s) taught:

Subject area(s) taught:

Total surveys completed:

1. How many years have you worked as a teacher?

This is (or will be) my first year	This is (or will be) my second year	More than 2 years

2. How many years have you taught at Pueblo Unified?

This is (or will be) my first year	This is (or will be) my second year	More than 2 years

3. How many years have you taught at the school where you currently teach?

This is (or will be) my first year	This is (or will be) my second year	More than 2 years

4. Where were you before coming to Pueblo Unified? **(Please check one) /**

____ College/University

Where did you go to school?

_____

- University of Wyoming (Graduate) / New Mexico State University (Undergrad)
- University of Northern Colorado
- CSU-Pueblo
- University of Southern Colorado
- University of Southern Colorado
- University of Southern Colorado or CSU-Pueblo

What was your major field of study?

_____

- Undergrad – Education / Grad - Education Technology
- B.S. Business Marketing / Post Bac. Elementary Ed.
- History
- Liberal Studies
- Exercise Science K-12
- Liberal Studies / Elementary Ed.

What degree or certification did you receive?

_____

- B.S. in Education / Masters in Educational Technologies
- B.S. / Post Bac / MA
- History / Teaching Certification
- Elementary Education
- B.S.
- K-6 Endorsement Science minor

____ **Another school district**

What mentoring, if any, did you receive there?

_____

- Briefly, why did you leave that district?

  _____

- **Other work**

What sort of work did you do?

_____

- Marketing – for Non-profit

5. Are you part of any formal or informal teacher support communities (e.g., university cohort listservs)?

Yes (please specify) _____

- **CAPHERD, Induction**
- **Was last year – induction program**

No ____
No Answer _____

6. How would you rate your technology skills in the following areas? **(Please check one box per row)**

	No Experience	Beginner	Intermediate	Expert
a. Using the Internet to communicate with colleagues or participate in professional communities				
b. Using my school's or district's computer network				
c. Finding instructional resources on the World Wide Web				
d. Using technology in the classroom to have students work in teams and collaborate				
e. Using technology in the classroom to have students use Web-based resources				

7. How much experience have you had with each of the following online communication tools or activities? **(Please check one box per row)**

	No Experience	I've done this once or twice	I've done/I do this infrequently	I've done/I do this occasionally	I do this often
a. Using email to communicate with friends or colleagues					
b. Participating in email listservs (e.g., Yahoo Groups)					
c. Participating in asynchronous online discussions (e.g., message boards, threaded discussions, newsgroups)					
d. Using instant messaging (e.g., AOL Instant Messenger, ICQ)					
e. Participating in online, real-time (synchronous), text-based chats (e.g., chat rooms)					
f. Participating in online courses using course delivery tools (e.g., Blackboard, eCollege, WebCT)					
g. Participating in audio/video meetings over the Internet (e.g., Webcasts, videoconferencing), or other interactive video					

8. Please complete this sentence by checking all that apply: At my school, I have (or will have) access to:

_____ A computer lab

_____ A mobile laptop cart

_____ A classroom computer (devoted to teacher use)

_____ Classroom computers (at least 2) for students

_____ A dedicated printer (for my classroom)

_____ A shared printer

_____ Don't know/not sure

9. Is there reliable, high-speed Internet access at your school?

_____ Yes

_____ No

_____Don't know/not sure

Do you have reliable, high-speed Internet access from your classroom?

_____ Yes

_____ No

_____Don't know/not sure

10. Is there a computer in your home to which you have regular access?

_____ Yes

_____ No

11. Do you have Internet access from home?

_____ Yes

_____ No

What is the nature of your home Internet access?

_____ High-speed (e.g., DSL, cable modem)

_____ Dial-up (e.g., AOL or Earthlink account)

_____Don't know/not sure

12. In an average week, how many TOTAL hours do you spend connected to the Internet for personal AND professional purposes?

_____ More than 2 hours per day

_____ About 2 hours per day

_____ About 1 hour per day

_____ About 2-3 hours per week

_____ About 1 hour per week

_____Less than 1 hour per week

_____ I never use the Internet

Socorro, Texas

Below is a copy of the survey instruments used at the **Socorro, Texas** TLINC Phase I site. This survey examined new teachers' attitudes toward their mentoring program and what they would like to see in order to make the mentoring program better.

Induction/Mentoring Program. *Please rate the following statements in light of your experience with the induction/mentoring program.*	**No or Never**	**Somewhat**	**Most of the Time**	**Yes or Almost Always**
The mentoring/induction programs provide me with ***emotional*** support. (e.g., self-esteem, self-reliance, confidence)				
The mentoring/induction programs provide me with ***procedural*** support. (e.g., help with procedures at my school)				
The mentoring/induction programs provide me with ***classroom management/discipline*** support.				
The mentoring/induction programs provide me with ***informational*** support. (e.g., district policies, information on the TAKS, etc.)				
The mentoring/induction programs provide me with ***content-area*** support.				

The mentoring/induction programs provide me with ***instructional*** support.				
The mentoring/induction programs help me to develop a ***better knowledge*** of my students.				
The mentoring/induction programs help me to understand and ***assess*** how students learn.				
The mentoring/induction programs help me to develop and use ***better questioning and discussion techniques.***				
The mentoring/induction programs help me to design ***activities that promote student learning***.				
The mentoring/induction programs help me to establish a ***culture of learning*** with high expectations in my classroom.				
The mentoring/induction programs help me to ***successfully prepare my students for the TAKS***.				
The mentoring/induction programs help me to ***communicate more effectively with parents/caregivers***.				
The mentoring/induction programs help me to ***reflect*** on and improve my teaching.				
The mentoring/induction programs help me to ***maintain accurate records*** (e.g., for special needs students)				
The mentoring/induction programs help me to ***grow and develop professionally***.				
The mentoring/induction programs help me to feel more professionally ***confident***.				
The mentoring/induction programs help me to become a ***better teacher***.				

Please indicate your agreement with the following statements. *Provide additional comments in the space provided.*	**Yes**	**No**
In my interview for my current position, I was properly prepared for the realities of the school in which I now teach. *Comments:*		

My administrators' expectations of me are clearly communicated to me and are reasonable. *Comments:*		
I understand the criteria by which I am evaluated and I participate in my own evaluation. *Comments:*		
I have the materials and equipment I need to be successful at my job. *Comments:*		
I have a reasonable work load. *Comments:*		
I often receive recognition or praise for doing good work and constructive feedback when I need help. *Comments:*		
My mentor is available when I seek assistance. *Comments:*		
My mentor seems to care about me as a person. *Comments:*		
My mentor encourages my development as a teacher. *Comments:*		
The mentor training provides me with useful information or skills that are relevant to my classroom. *Comments:*		
I feel supported by my mentor and by my administrator. *Comments:*		
I have a best friend at work. *Comments:*		

I feel part of a team. *Comments:*		
I feel that I am becoming a better teacher as the year progresses. *Comments:*		
I seek out help when I need something. *Comments:*		
I have time for learning on the job. *Comments:*		
I am satisfied with my school's induction/mentoring program. *Comments:*		
I feel there are enough supports at the district and school level to help me in my job. *Comments:*		
This year I've had opportunities at work to learn and grow. *Comments:*		

Additional Supports. *How helpful would the following types of additional supports be in terms of making you feel more successful in your teaching? Please add anything else that would be helpful.*	**Not helpful**	**Somewhat helpful**	**Very helpful**
Additional workshops in (please indicate)_____ _____			
A reduced teaching load.			
More induction/mentoring meetings and activities.			
Extend the mentoring program to second-year teachers.			
Additional resources and materials, such as (please indicate) _____			
Same planning period as my mentor.			

Membership in a professional organization.			
More frequent meetings with my mentor.			
More frequent meetings with other new teachers at my school.			
More frequent meetings with my administrators.			
Informal meetings with other new teachers with whom I attended college.			
Matching with an experienced teacher who teaches the same subject area as me.			
Matching with an experienced teacher who teaches the same grade level as me.			
Access to online resources, such as content area web resources, teacher bulletin boards.			
Access to print resources, such as educational journals, books, and educational magazines.			
Online access to experienced teachers from around the US.			
Online access to new teachers from around the US.			
Other (please indicate)_____ _____ _			
Other (please indicate)_____ _____ _			

FOCUS GROUP PROTOCOL

Below is the formal script used for the TLINC focus groups sessions conducted in the four Phase I sites:

Good afternoon. My name is _____ and I'm conducting this focus group to inform the development of new tools and processes to support new teachers in your district. The project is called T-LINC, or "Teachers Learning in Online Communities." With funding from the AT&T foundation, T-LINC has identified four districts, including_[this one]_ to participate in the joint development of new teacher support programs.

We are recording this session solely for the purposes of taking accurate notes. None of your responses will be attributed directly to you without your prior permission.

[NOTE: Teachers and mentors will be asked to take the brief paper survey either before or after the focus group session]

First Year Teachers

What drew you to the teaching profession? What sorts of expectations do you have of this career choice?

What sort of preparation program did you go through to ready yourself for teaching? How long ago was your involvement in that program? Are you still in contact with colleagues or mentors from your teacher prep institution?

Considering that you are about to begin school, what keeps you up at night? In other words, what are your top concerns about this new adventure? [Prompt: planning, teaching, managing, tenure, evaluation by principal, acceptance by peers, content knowledge, pedagogical skill]

Paint a picture of how you see yourself interacting with other teachers at your new school. Do you expect to become part of a community, or will you be left to fend for yourself? To whom will you turn for support and advice? What will you do if you come up short in your own content area?

What kind of support [emotional, technical, content-specific] do you expect to receive during your first few years? From whom? What role do you expect your principal to play?

How "safe" do you think you'll feel sharing issues and concerns with other teachers in your school? How comfortable are you with sharing failures, as well as successes? If something goes wrong in a lesson, will you share that experience and seek advice? With whom? [Prompt: Mentor, other new teacher, experienced teacher in your school,

experienced teacher in another district, principal, professor]? In what format? [Prompt: in person, or via telephone, email, listserv, or online discussion group?]

What resources outside of the district do you expect to rely on for information, support, or mentoring? [Prompt: Web-based, coursework, etc.]

What has been your experience with online communities? [Probe for depth and scope, feedback on what they did and didn't like about participating in such communities]

Second Year Teachers

What drew you to the teaching profession? What sorts of expectations did you have of this career choice? To what extent have these expectations been met, and what were some surprises? Are the expectations expressed by your first-year colleagues realistic? Why or why not?

From whom did you get support last year? What kinds of support did you get [emotional, technical, subject-specific] from: mentors, more experienced colleagues in your subject area or grade level, your principal, another new teacher, a friend or spouse in education, a friend from your university, a professor, or an induction program?

Do tenure decisions weigh heavily? How does the prospect of tenure – especially the fear of not getting it – impact your teaching? Your sharing? Would the opportunity for more "anonymous" sharing (for example, by posting your concerns to a message board or communicating with an experienced teacher outside of your district) help?

Now that you have some experience under your belt, how "safe" do you feel sharing issues and concerns with other faculty members? If something goes wrong in a lesson, do you share that experience and seek advice? With whom? [Prompt: Mentor, other new teacher, experienced teacher in your school, experienced teacher in another district, your principal]? In what format? [Prompt: in person, or via telephone, email, listserv, or online discussion group?]

What resources outside of the district do you rely on for information, support, or mentoring? [Prompt: Web-based resources, workshops, teacher guides, etc.]

What has been your experience with online communities? [Probe for depth and scope, feedback on what they did and didn't like about participating in such communities] How much of this experience has taken place in your current position as a teacher in this district? In another district?

Mentors

Have you been a mentor before, or are you new to mentoring? What previous mentoring experiences and training have you had, and how do (or how will) those experiences impact your work as a mentor?

How do the various partners in this district's mentoring program communicate? To what extent is communication primarily logistical, and to what extent is it related to content/mentoring concerns or to supporting specific new teachers?

Describe the key concerns of new, first-year teachers in Pueblo. How did you ascertain these? How "present" a concern is tenure? How often do you hear of specific content, pedagogy, or standards related requests for assistance?

How do you view your role as a mentor? Is it to provide new teachers with procedural/technical support, emotional support, pedagogical support, and/or content-area support?

Of the resources offered by this district's mentoring program, which do you see as needed but underused? Why do you think that's true? Where else do your mentees get support?

What are key supports for new teachers that you think need additional attention or resources? Together, let's create a list of the top five support needs [use white board for brainstorming]. Now let's score each on a scale of one to five in terms of the extent to which current programs and processes successfully meet those needs, with one meaning needs are fully met, and five meaning the area is greatly in need of additional support or resources. We're not voting – we need to come up with consensus ranks and ratings.

Describe your most intensive experience using online tools for professional development, professional collaboration, course taking, or related online interactions. What needs did this experience meet for you? What needs did it fail to address? How comfortable were you with the technology skills it required? Did the experience prompt you to develop your technology proficiency?

What are key features of online collaboration or professional development sites that should be included in any related tool development by this project?

INTERVIEW PROTOCOLS FOR TLINC MEETING PARTICIPANT RESPONDENTS

The interview protocols below were used to query different categories of TLINC project participants after the completion of the first phase. The first protocol was used for project designers. The second protocol was used for university officials and the third protocol is aimed at school district officials.

TLINC PROJECT DESIGNER INTERVIEW PROTOCOL

1) Did the idea of building "professional learning communities" for the purpose of new teacher induction resonate in the school districts you visited?

2) Did the concept of using technology, such as the TLINC program, in building networked professional learning communities resonate with the district and university officials involved in the planning meetings? What "value add" did they see to using technology to advance their efforts?

3) In what aspects did the school districts appear to be farthest along in terms of creating learning communities?

4) On a scale of 1-10, rate the extent to which technology was used in the district to create these communities? Provide examples where possible.

5) What are the most important indicators you would look at in determining if T-LINC had inspired progress in a district's teacher induction process?

6) What conditions essential to success do the districts need to put in place before they can successfully implement an electronic network to enhance a professional learning community?

7) Who are the key district decision makers and participants that must support a technology-rich learning community for it to be successfully implemented?

8) What are the greatest challenges facing districts that are seeking to build networked professional learning communities?

9) Any additional comments?

TLINC UNIVERSITY OFFICIAL INTERVIEW PROTOCOL

1) Is the TLINC concept using technology to link your university department to the local school district viable with the teacher training program you currently have in place?

2) How do you envision technology adding value to your teacher induction process?

3) How does the concept of "professional learning communities" fit into your teacher training program?

4) If you created a networked learning community in your district using the TLINC concept, what would be the criteria for measuring its impact and success?

5) What are the most important indicators you would look at in determining if TLINC had inspired progress in your district's teacher induction process?

6) How would TLINC be useful in connecting teacher trainers at the university level to in-service teachers? How would enhance the instruction of and connection with pre-service teachers?

7) What are the primary obstacles or challenges to involving university-level teacher trainers in learning communities? Are there any specific challenges relating to technology for this group of people?

8) In what specific ways can technology serve to sustain a learning community where face-to-face contact falls short?

9) What are the essential conditions a district or university needs before implementing an electronic network to create or enhance a professional learning community?

10) Who are the key university decision makers and participants that must support a technology-rich learning community for it to be successfully implemented?

T-LINC DISTRICT OFFICIAL INTERVIEW PROTOCOL

1) Is the T-LINC concept viable with the teacher induction regime in place within your district?

2) The T-LINC project had the primary goals of: improving new teacher retention and supporting teacher learning. It seeks to achieve these goals by providing access to high-quality teaching resources, frequent access to experts, and providing ongoing peer support. Which of these goals aligns best with school district plans for teacher induction?

3) How does the concept of "professional learning communities" fit into your teacher induction program?

4) If you created a networked learning community in your district using the T-LINC concept, what would be the criteria for measuring its impact and success?

5) What are the most important ways that technology can support districts' creation of a community of education professionals and its partners?

6) What needs to be in place before a district can successfully implement an electronic network to enhance a professional learning community?

7) Who are the key district decision makers and participants that must support a technology-rich learning community for it to be successfully implemented?

8) What are the greatest challenges facing districts that seeking to build networked professional learning communities?

9) Any additional comments?

Appendix B

Issues Facing Novice Teachers: Strategies and Resources

Issue	Strategies to Address Such Issues	Examples/ Resources (Books, Web Sites, Programs)
Teacher Preparation		
Conflict between novice teacher's idealism and optimism vs. reality of teaching	**1. Reconfiguration of pre-service programs:** • Earlier and progressive student exposure to classroom (e.g., during freshman year, students observe classrooms. • More comprehensive formal induction program.	**Examples of such pre-service programs** • **Teachers College of Columbia University and two NYC public schools** (Two-year[iv] Masters program in education. All degree candidates student taught for 2 semesters. *Year One*: Candidates become "teacher interns." Continue working with 2 master teachers and various classrooms *Year Two*: Candidates take over class for 6 weeks. Master teacher works on project of his/her choosing *Year Three*: Candidates teach but are mentored by master teachers. Available at: http://niusi.edreform.net/resource/10582) • **University of South Florida:** http://niusi.edreform.net/resource/10661 • **State of Tennessee** • **Neag School of Education, University of Connecticut:** Five-year comprehensive teacher preparation program that integrates coursework, school-based clinic experiences and university and K-12 faculty in the preparation of pre-service teachers. Students enter the IB/M teacher preparation program in their junior year and are enrolled in the program for 3 years-earning both a Bachelor's and a Master's degree. Available at: http://www.education.uconn.edu/admissions/teacherprep/ibm/index.htm **Online supports for pre-service teachers to prepare them to transition into full-time teaching:** • Electronic Education Exchange (EEE) at Iowa State College of Ed: Bulletin board system in which student teachers are assigned a student teacher partner and faculty partner. • Teacher-LINK: Curry School of Education: Provides computer-assisted communications between teachers and faculty. • Columbia University: New Teacher Institute • EDTNet: Miami University at Ohio Furtwengler, C.B. (1995). Beginning teachers programs: Analysis of state actions during the reform era. *Education Policy Analysis Archives*, *3*(3). Available at: http://epaa.asu.edu/epaa/v3n3.html

	2. Recruiting qualified career professionals	**Transition to Teaching Program:** Provides grants for the recruitment, training, and placement of talented college graduates from other fields into teaching positions in high-needs schools and support for them during their first year in the classroom. Competitive, five-year grants are available to state educational agencies, local educational agencies, educational service agencies, and nonprofit organizations, including those with expertise in teacher recruitment. Available at: http://www.whitehouse.gov/firstlady/initiatives/education/transitiontoteaching.html

	3. Professional development opportunities that bridge pre-service and initial teaching assignments. • Remembering that new teachers are not "finished products." • Entry level teaching support in residencies and mentored instruction.	**School-based professional development opportunities that bridge pre-service and initial teaching assignments** • Wells, ME Public Schools • Puget Sound (WA) Professional Development Center
	4. Assist schools in improving their teacher recruitment and selection process. • Selection process/interviews offer opportunity to communicate a school's professional culture, instructional goals, expectations of a new teacher • What skill set, attitudes, and characteristics are important in a new teacher? • Will this teacher's goals, experiences and background match with current school climate?	**University of Texas: U-Teach** • Active recruitment and support of Natural Science undergraduates who are interested in careers in secondary math and science education. Support includes tuition reimbursement, small cohorts of students, paid internships, and guidance by master teachers. Emphasis on preparing teachers who will be knowledgeable of their discipline, experienced with involving students in scientific inquiry, and practiced in employing new technologies to enhance student learning. Available at: http://www.uteach.utexas.edu/

	5. Schools can provide informal learning opportunities that: • Create an environment that promotes ubiquitous learning ("learning organization") • Help teachers learn to improve how they learn • Create a supportive learning culture • Provide time for learning on the job • Create a supportive organizational culture	**Informal Learning Opportunities:** • Cornell, P. & Baloga, M. (1992) Work and the new "office." Proceedings of the workshop on "Productivity in Knowledge Intensive Organizations", April, 1992. • Grebow, D. At the Water Cooler of Learning. Available at: http://agelesslearner.com/articles/watercooler_dgrebow_tc600.html • Lave, J. & Wegner, E. (1991) Situated learning. Cambridge: Cambridge University Press. • Senge, P. (1990) The Fifth Discipline: The art and practice of the learning organization. New York: Doubleday Currency.

Emotional/Cultural Challenges	
Isolation	**1. New Teacher Supports** • Forum in which teachers can ask for help or support • Multiple year induction time frame, which allows for "survival," establishment of professional identity, and time to strengthen professional practice • Emotional/social supports
	2. Induction programs that offer the following types of support: • Emotional • Instrumental • Informational • Appraisal
	3. Mentoring/Coaching (fact-to-face peer coaching, "buddy" system, or "Master Teacher" approach) • Increased retention rates for novice teachers who have participated in new teacher induction programs (NCTAF, 1996) • Offer emotional and instructional supports to teachers
	4. Telementoring (via email or BB systems) • Emotional/psychological support • Instruction-related support • Novice teachers can communicate when needed and from a place of their choosing (private)
	5. Provide incentives for master/mentor teachers.
Lack of/conflicting administrator expectations	**1. Principal as a "lead teacher:"** • Articulation by principal of desirable type of instruction and clear instructional goals.
	2. Collaborative evaluation between administrator and teacher • Administrator and teacher participate in creating criteria by which teachers are evaluated. • Focus on formative versus summative evaluation of teachers. • Create conditions in which administrator presence in classroom is welcomed.

Poor student motivation	**1. High teacher expectations for students are a critical component to student success.** **2. Standards for classroom behavior are explicit.** • Teachers let students know that there are high standards for behavior in the classroom. • Consistent, equitable discipline is applied for all students. **3. Personal interactions between teachers and students are positive.** • Teachers pay attention to student interests, problems and accomplishments in social interactions both in and out of the classroom. • Teachers make sure they let students know they really care. **4. Incentives and rewards for students are used to promote excellence.** • All students know about the rewards and what they need to do to get them. Rewards are chosen because they appeal to students. • Rewards are related to specific student achievements. Some rewards may be presented publicly; some should be immediately presented, while others delayed to teach persistence. **5. Discipline is firm and consistent.** **6. Incentives and rewards are used to build strong motivation.** **7. Training.** This can enable school staff members to become aware of their unconscious biases and differential treatment of students, and help them to make positive changes in their thinking and behavior. **8. Teachers can** (from Collins, K. *Expectations and Student Outcomes)*: • Avoid unreliable sources of information about students' learning potential, e.g., social stereotypes, the biases of other teachers, etc. • Set goals (for individuals, groups, classrooms, and whole schools) in terms of minimally acceptable standards: communicate to students that they have the ability to meet those standards. • Use heterogeneous grouping and cooperative learning activities whenever possible; these approaches capitalize on students' strengths and take the focus off weaknesses. • Develop task structures in which students work on different tasks, on tasks that can be pursued in different ways, and on tasks that have no particular right answer. This will minimize harmful comparisons. • Emphasize that different students are good at different things and let students see that this is true by having them observe one another's products, performances, etc. • Concentrate on extending warmth, friendliness, and encouragement to all students. • Monitor student progress closely so as to keep expectations of individuals current. • Give all students generous amounts of wait-time to formulate their answers during recitations; this will increase participation and improve the quality of responses. • In giving students feedback, stress continuous progress relative to previous levels of mastery, rather than comparisons with statistical norms or other individuals. • In giving students feedback, focus on giving useful information, not just evaluation of success or failure. • When students do not understand an explanation or demonstration, diagnose the learning difficulty and follow through by breaking down the task or reteach it in a different way, rather than merely repeating the same instruction or giving up. • Stretch the students' minds by stimulating them and encouraging them to achieve as much as they can, not in terms of "protecting" them from failure or embarrassment.

Conflicting roles as young adult and authority figure	1. Mentoring by master teachers to provide emotional support, encourage self-esteem, enhance self-reliance, establish boundaries with students, and learn to handle stress

Environmental Challenges		
Inadequate Resources (Where to find new materials)	**1. Electronic Resources:** Help teachers find online content, resources, and networks of instructional materials.	**Examples:** 1. Instructional Materials in Science Education: http://www.ncsu.edu/imse/ 2. TALON: Online Database of Teacher Resources: http://www.southcentralrtec.org/talon/index.html 3. Other examples: Marco Polo, state and district portals 4. See "Information Resources for Teachers" List
Difficult work assignments (placement, large class sizes, mismatch between teacher qualifications and student needs, etc.)	**1. Provide reasonable or reduced teaching assignments to new teachers** • Do not assign "hardest" classes to "newest" teachers • Working with local unions to help newest teachers • Incentives for "best" teachers to work with "worst" • Reduction in class size	**North Carolina Professional Teachings Standards Commission:** *Working Conditions Survey* (Administered to 45,000 state teachers. Results to be analyzed in order to improve conditions for teachers) Survey goals: 1) hear from teachers and administrators about what they identify as areas in need of improvement, 2) understand what school characteristics appear to affect those perceptions, and 3) provide data on working conditions to local school leaders and state policymakers. The survey includes 39 statements about working conditions in five categories: 1. Time Management 2. Facilities and Resources 3. Leadership 4. Personal Empowerment 5. Opportunities for Professional Development For more information, see: http://www.ncptsc.org/
Environment not conducive to learning	**1**. Creation of environment in which teaching and learning are culturally and institutionally embedded in organizations, and are seen as beneficial to school and individual. **2.** Alignment of several factors: school's goals, a focus on systems, strong leadership and providing ongoing learning opportunities. **3.** What growth opportunities are afforded to teachers? **4.** What contextual factors promote/impede learning?	**References for Points 1-4:** 1. Atlas Community Project: http://www.new-albany.k12.oh.us/district/admin/johnson/superintendent/StrategicPlan/Management.htm 2. EDC, Center for Workforce Development (1998). The Teaching Firm: Where Productive Work and Learning Converge. .3. Hord, S. (1997). Professional Learning Communities: What Are They And Why Are They Important? Available at: http://www.sedl.org/change/issues/issues61.html

Professional Challenges		
Classroom Management/ Discipline Problems	**1. Any professional development should help new teachers with such issues as:** • Classroom size • Teacher self-esteem • Using visual vs. verbal cues • Establishing behavior parameters • Follow up • Consequences for poor behavior **2. Administrator support for teachers** **3. Working with parents**	1. Teach.Net Classroom Management Techniques Available at: http://www.teachnet.com/how-to/manage/ 2. The Behaviour Home Page: Available at: http://www.state.ky.us/agencies/behave/homepage.html 3. The Really Big List of Classroom Management Resources. Available at: http://www.state.ky.us/agencies/behave/homepage.html
"Learning to teach vs. learning to teach well" (Instruction)	**1. Provide time, space and encouragement to promote "informal learning" that includes information that is:** • Task-specific • Intrapersonal • Interpersonal • Cultural	1. **San Francisco Unified School District Peer Assistance & Review (PAR).** Collaborative between San Francisco Unified School District, the teachers' union (UESF) and the administrators' union (UASF), to support and renew quality teaching in every classroom. Master teachers provide peer support and review to new teachers and permanent teachers who have received ratings of *Does Not Meet Standard, Unsatisfactory, and Improvement Needed* on summary evaluations. Available at: http://portal.sfusd.edu/template/default.cfm?page=chief_academic.teacher_affairs.par 2. For more examples of Peer Assistance and Review Programs, see *Teacher Union Reform Network, Peer Assistance & Review*. Available at: http://www.turnexchange.net/contracts/summary-par.htm 3. Bradley, A. (1998). *Peer-Review Programs Catch Hold* *As Unions, Districts Work Together*. EdWeek. Available at: http://www.edweek.org/ew/vol-17/38peer.h17.

	2. Learner-centered professional development that is: • Ongoing • Site-based • Driven by teachers' needs and goals • Focuses on theory, reflection and practice	1. Corcoran, T. (1995). *Helping teachers teach well: Transforming professional development.* Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania Graduate School of Education. (Publication No. RR-035A) Available at: http://www.cpre.org/Publications/rb16.pdf 2. Professional Development Articles at Staff Development.org. Available at: http://staffdevelop.org/articles.html 3. Results Oriented Professional Development Available at: http://www.ncrel.org/sdrs/areas/rpl_esys/pdlitrev.htm 4. Applying Technology to Restructuring and Learning Available at: http://www.southcentralrtec.org/products/research_2000.pdf 5. Schon, D. The Reflective Practitioner: How Professionals Think in Action.
	3. Instructional support through mentoring.	(See mentoring resources under *Teacher Preparation* section)

Curriculum Design	**1. For example, assist new teachers with:** • Backward Design • Curriculum Mapping • Helping teachers frame essential questions	1. McTighe, J. & Thomas, R. (2003). Backward Design for Forward Action. In Educational Leadership (60), 5. Available at: http://www.ascd.org/articles/el200302_mctighe.html 2. Wiggins, G. & McTighe, J.(1998). *Understanding by Design*. Alexandria: ASCD. 3. NCREL Curriculum Mapping Web site. Available at: http://currmap.ncrel.org/default.htm 4. Creating Essential Questions Available at: http://www.galileo.org/tips/essential_questions.html
Understanding Assessment	• Helping teachers to build upon and define professional judgment • Alternative Assessment • External Testing	1. Wiggins, G. (1998). *Educative Assessment*. San Francisco: Jossey-Bass. 2. Principles and Indicators for Student Assessment Systems: National Forum on Assessment Available at: http://www.fairtest.org/princind.htm 3. Marzano, R., Pickering, D. & McTighe, J. (1993). Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model. Alexandria: ASCD.

Conflicting expectations: parents, community, administration		1. Kraft, S. P., & Snell, M. E. (1980). Parent/Teacher Conflict: Coping with Parental Stress. The Pointer, 24 (2), 9-38. 2. Miller, A. (2003). Teachers, Parents and Classroom Behaviour. Open University Press. 3. Seven Oaks School Division Teacher Resources. Available at: http://www.7oaks.org/ttt/ttt4.htm