

# **Windows into Teaching and Learning [WiTL]**

**Tina L. Heafner, Ph.D.**

**Teresa M. Petty, Ed.D.**

**Department of Middle, Secondary, and K-12 Education**

**College of Education**

**University of North Carolina at Charlotte**

**2010 SoTL Grant Submission**

**October 26, 2010**

## **Windows into Teaching and Learning [WiTL]**

### **Abstract**

Clinical experiences in public schools are a requirement for all teacher education candidates seeking licensure. Clinical experiences range from ten to thirty hours per course and many university students take multiple education classes during the same semester. In addition to the number of clinical hours, teacher candidates are also expected to participate in three diverse clinical settings (e.g. three semester placements in an urban, suburban, and rural school). While these requirements traditionally have not posed a barrier for university students, new challenges have emerged with online licensure programs. We define these as potential barriers limiting the geographic outreach and diversity of recruitment of qualified professionals in high-need areas (STEM subjects). In response to these clinical obstacles and with our growing desire to provide quality online learning, we have developed a research project that will explore options for clinical experiences and technology mediated alternatives to school-based clinicals. Our goal is to develop a process for facilitating meaningful and quality clinical experiences that provide a window into teaching and learning [WiTL]. This process is more than access to a classroom. It is also a systematic process for reflective analysis of pedagogical decision-making and its impact on adolescent learners. This project will serve as a pilot study examining two viable platforms for online clinicals: asynchronous and synchronous. Results will inform future programmatic decisions and outreach within the College of Education. Additionally, the study will serve to jumpstart efforts for external funding to support technology initiatives in teacher education.

# Windows into Teaching and Learning [WiTL]

## Project Narrative

### Defining the Problem and Context for Solutions

Technology has changed the nature of teaching and learning in the 21<sup>st</sup> Century. This is especially prevalent in higher education. With the advent of online learning and Web 2.0 tools, how institutions of higher education serve their student populations is evolving. The possibilities of technology mediated learning along with recent economic contractions have led to administrative decisions to shift investments in infrastructure renovations and new construction to low overhead options such as online learning, migrating away from the “brick and mortar era” of schooling (Schulken, 2008, p.1). As online educational environments continue to expand in higher education, innovative strategies for replicating requirements of classroom-based teaching and learning are sought.

In teacher education, field experiences in clinical settings (e.g. observations in PK-12 schools) are considered essential licensure requirements for preparing preservice and lateral entry teachers. These classroom experiences bridge theoretically-based university coursework in content and pedagogy with practical applications of teaching and learning with PK-12 learners. The importance of these authentic experiences is affirmed by our national accrediting body, NCATE (National Council for Accreditation in Teacher Education), who identifies field experiences and clinical practices as one of six *Professional Standards for the Accreditation of Teacher Preparation Institutions*. In the words of NCATE (2007), field experiences allow teacher candidates to observe and reflect on content, professional, and pedagogical knowledge, skills, and dispositions in a variety of settings with diverse students and teachers. Both field experiences and clinical practice extend the institutional goals into practice through modeling by practicing teachers, systematic reflective analysis, and well designed opportunities to learn about methods and content applications (p. 29-30).

Currently in the College Education, all clinical experiences are completed onsite in PK-12 schools. Clinical experiences are required in most, if not all, teacher education classes within a university student’s degree and/or licensure program. Clinical experiences range from ten to thirty hours per course and many university students take multiple education classes during the same semester. It is possible that clinical requirements could be as great as 90 hours in a single semester. These clinical hours are an extension of class expectations for pedagogical coursework. In addition to the number of clinical hours, teacher candidates are also expected to participate in three diverse clinical settings (e.g. three semester placements in an urban, suburban, and rural school). While these requirements traditionally have not posed a barrier for university students, new challenges have emerged with online licensure programs.

In the College of Education, field experiences are arranged by the Office of Field Experiences (OFE) for all teacher education candidates. OFE has partnerships with Charlotte-Mecklenburg and twelve surrounding counties in which schools agree to place teacher candidates from UNC Charlotte in their schools and support them in their field-based training. With the growth and

expansion of online licensure programs, teacher candidates are no longer limited to residence within the greater Charlotte region traditionally served by the University. For example, the Department of Middle, Secondary, and K-12 Education's GCT (Graduate Certificate in Teaching) licensure program enrolls students from over a third of the counties in North Carolina. The licensure candidates who reside outside of the aforementioned boundaries (defined henceforth as proximity parameters) are required to find their own clinical placements. This can pose a barrier for teacher candidates who do not have relationships with local school systems. Additionally, UNC Charlotte cannot predict the quality of placement for these candidates since they are not involved in these clinical arrangements.

Not only are candidates outside the proximity parameters expected to gain placements for one semester, they are expected to arrange three diverse placements with three different schools over the duration of their program of study. The requirement of three diverse placements for clinical experiences is a licensure requirement established by NCATE and NCDPI: "Field experiences allow candidates to apply and reflect on their content, professional, and pedagogical knowledge, skills, and professional dispositions in a variety of settings" (NCATE, Standard 3, p. 29). The purpose is to prepare future teachers in the complexity of working in multifaceted school settings that pose unique differences. For example, needs of suburban schools and the students they serve are quite different from schools within urban centers or in rural communities. For teacher candidates to understand these differences, they need opportunities to learn in diverse schools. Students who reside outside of the proximity parameters have limited access to schools within their own geographic boundaries. It is likely impossible for a candidate in a rural county to learn what schooling is like in an urban context, such as CMS, through observation. Overcoming these barriers is something that has to be addressed for online programs that recruit students from underserved counties in rural locales across the state of North Carolina.

In tough economic times and when unemployment is on the rise, the general populous seeks ways of improving or diversifying their skill-base and employability. Given the past trends of teacher shortages, and continued demand for qualified professionals in STEM subjects, many working professionals have sought second career opportunities as teachers. Economic constraints, while attracting an interested population, have posed limitations for access to careers in teacher education. Specifically, clinical requirements are frequently problematic for working professionals who are taking classes during the evenings and maintaining a full-time job during the day. The traditional approach to teacher education classes has been to conduct clinicals during the working hours and in reality this is when schools operate. Requiring second career professionals to take a day (or a week) off of work to conduct clinicals has limited the number of applicants to teacher education. Finding viable alternatives that might allow someone to take off an hour or two out of the work day or time outside of the daytime work hours would be a potential recruitment tool for underserved areas. These options could open, not close, doors to increasing teacher education enrollments in graduate licensure and degree programs.

Finally, summer classes are especially attractive to lateral entry teachers and to unemployed individuals seeking the most cost-effective pathway to licensure and future employment as a teacher. We currently have rolling enrollments in the GCT and MAT programs. Most if not all teacher candidates in these programs take summer classes and many of these classes (over half) are online courses. The challenge of clinical requirements during summer sessions is that public

schools (the location of clinicals) are closed. In prior years, we could tap into summer school programs for remediation, but due to budget cuts, K-12 schools have eliminated these programs. Last summer, teacher candidates were expected to find their own clinical placements in very creative settings, such as summer camps or YMCAs. While these served as meaningful experiences for understanding children, they were far removed from teaching subject area content in middle and high schools. Thus, seasonal access poses the fourth identified barrier to online programmatic outreach.

## **Purpose of Project**

In response to these four barriers to clinicals and with our growing desire to provide quality online learning for teacher education, we have framed two research questions that we seek to address as an outcome of this proposal. First, what are options for clinical experiences in online learning? Second, are there technology mediated alternatives to school-based clinicals? These questions serve as the focus of our SoTL grant and for our future study. From our review of the literature and project evaluation of ROGI (remote observation of graduate interns), we identify two viable platforms for online clinicals: asynchronous and synchronous. Therefore, the purpose of this SoTL grant is to explore in a pilot study the possibilities and differences of asynchronous and synchronous field experiences as alternatives to traditionally-based field experiences. Based on the findings of this pilot study, we will seek external funding to expand the project to serve all teacher education programs in the College of Education.

## **Literature Review**

Data from initial research studies evaluating the effectiveness of the remote observation process provide evidence that teleconferencing as a technology mediated solution is *comparable* and *interchangeable* with traditional face to face observations (authors, 2009; 2010). The use of technology did not inhibit the evaluation of teaching effectiveness and sustained professional growth of interns over the course of the student teaching semester (authors, in review). In addition, the use of technology introduced new elements to the observation process extending the potential of online learning beyond long-standing methods of teacher preparation. The added value of technology materialized as layers of benefits to the university, program, school, observer (higher education observer), and the intern.

Consequently, the remote observation process offers a meaningful and purposeful application of technology (Gentry, 1995; Mason, Berson, Diem, Hicks, Lee, and Dralle, 2000; NCSS, 2006), which models 21<sup>st</sup> century skills by bridging theory and practice in more authentic, collaborative, creative, and powerful ways (NCSS, 2009; Partnership for 21<sup>st</sup> Century Skills, 2009). The remote observation process capitalizes on emerging technologies via a multi-textual module of video, audio, and print as a solution to growing pedagogical needs in an evolving online teaching and learning community and financially strapped economy. The remote observation process redefines the classroom enabling observers and interns (and potentially administrators) to build professional relationships in transparent educational settings (authors, 2009; 2010).

## Overview of Project Methods

During the spring semester, we will target two graduate online content area methods courses for the purpose of comparing synchronous and asynchronous online clinical experiences. Each of these courses requires 30 clinical hours. University students enrolled in these teacher licensure courses will participate in 12 single class period classroom observations, of which 6 will be synchronous and 6 asynchronous. Teacher candidates will have the opportunity to observe experienced teachers modeling effective practices for teaching content and adolescent learners. They will be given opportunities to debrief with the teacher mentors and pose questions related to the observed lessons. These interactions will occur both synchronously and asynchronously following each lesson. Teacher candidates will compare the modes of their clinical experiences at the end of the semester in focus group interviews and open-ended surveys.

In partnering with twelve successful mathematics and social studies teachers (six social studies and six mathematics teachers) in three middle and three high schools, we will create 100% online clinical observations for middle and secondary teacher candidates seeking licensure core content areas. The teachers are experienced teachers who hold master's degrees or national board certification. They offer content expertise and demonstrate applications of research-based best practices for teaching adolescent learners. They work in diverse school settings and have interacted with university faculty for several years. They are interested in partnering with MDSK faculty to support the professional preparation of teacher licensure candidates. Given the level of experience and role in this study, these teachers will be referred to as teacher mentors.

Each teacher mentor will select four lessons for observation. Two lessons will be observed synchronously using webcams, wireless headsets/microphones, and Wimba. These observations will occur real-time during the actual class meeting. The webcam will be positioned in the class and a camera operator will drive the movement of the camera and text (using the text chat feature in Wimba) to guide teacher candidate observations. Instructional materials will be available in the whiteboard of Wimba to be viewed during the class observation. Teacher candidates will be given a "window" into a live classroom of adolescent learners through the teleconferencing tool in Wimba. Following the lessons, teacher mentors will dialogue using Wimba with teacher candidates. This will be an interactive synchronous session. Both the observation and the post-conference debriefing will be archived in Wimba, making the observation viewable for further analysis and reflection in the university methods course.

For the remaining two lessons with teacher mentors, observations will be conducted asynchronously. Lessons will be recorded and a debriefing session will be held post-delivery. These will be archived using Wimba and will be available for teacher candidates to observe at their convenience rather than at a scheduled time during school hours. After a set date, candidates will then participate in an asynchronous threaded discussion with the teacher mentor to discuss their observations of and questions about the lesson. Teacher mentors will share their pedagogical decision-making and expertise as they dissect the learning experience. Archiving the lesson in Wimba will allow for future reflective

evaluation of teaching. Teacher mentor experiences in both asynchronous and synchronous lesson observations/ debriefings will be examined by comparing their experiences during post-semester individual interviews.

Combined these archived lessons will serve as a repository of clinically-based teaching and learning digital observations. These digital archived lessons will be used during the summer class sessions to address the access barrier to summer clinicals; thus, enabling “windows” into classrooms that are not seasonably available.

## **Evaluation**

To answer the guiding research questions of this grant and study, we will collect focus group and open-ended questionnaires from all university methods participants. In addition, we will individually interview teacher mentors. Focus group discussions, open-ended questionnaires, and interviews will be transcribed and evaluated using the qualitative constant comparative analysis by Glaser & Strauss (1967). Data will be examined in an effort to identify emerging themes related to participant perceptions and satisfaction with the two modes of clinical observations. A final data source will be transcriptions from threaded discussions and archived lesson debriefing exchanges. A systematic analysis of interaction data will be used to determine patterns in dialogue that provide insights in understanding the differences and impact on learning of the two online processes for clinical observations. Data analysis will be conducted by the two project researchers with the assistance of the graduate assistant. All findings will be shared with teacher mentors for cross-validation of interpretations.

## **Knowledge Dissemination**

Outcomes of this grant/study will be used to guide program decision-making for online teacher education coursework. Findings will also be shared with other program coordinators in the College of Education and the University Center for Teaching and Learning. Additionally, we believe that the findings of this evaluation of WiTL will inform other higher education institutions who are seeking solutions to barriers to online program delivery in teacher education. Thus, we will take a three-tiered dissemination approach, focusing on the higher education community, the K-12 community, and the fields of instructional technology and teacher education. We plan to present findings at annual conferences of relevant professional organizations, such as: Sloan-C, SITE (Society for Integration of Technology in Education), CUFA (College and University and Faculty Assembly), NCSS (National Council for the Social Studies), NCTM (National Council for Teachers of Mathematics), and AERA (American Education Research Association). Lastly, articles concerning the evaluation and research components of this project will be disseminated as book chapters or as articles in journals such as the *Journal of Teacher Education*, *Journal of Technology and Teacher Education*, *Educational Technology Research and Development*, the *Journal of Computing in Higher Education*, and others. Articles about the professional development and teacher support will be published in journals such as *Technological Horizons in Education*, *Contemporary Issues in Technology and Teacher Education*, and others.

## Human Subjects

We have been working to determine teacher interest and school support which began in early October 2010. As of October 26, 2010, we have identified participating teachers. We are working to secure letters of support from school administrators to accompany our IRB application. We on schedule to submit our IRB protocol in early November 2010. Consent from all participants will be gained in writing prior to implementation in spring 2011.

## Extramural Funding

Using data from this pilot study, applications for external technology grants will be submitted to FISPE, the Gates Foundation, and Transition to Teaching Grants. Additionally, we will also actively seek other funding opportunities as they become available.

## Timeline

Date	Project Task
October 2010	Letters of participation from schools
November 2010	Submission of IRB
December 2010	Initial meeting with Mentor Teachers to overview project, identify dates for observations and post-conferences, and develop a timeline of specific activities related to each lesson
January 2011	Project meeting with Mentor Teachers for IRB consent of participants  Inform university students enrolled in methods courses of project and gain consent to participate in research study
February-April 2011	Conduct synchronous and asynchronous observations  Work with Teacher Mentors to develop post-teaching reflections  Monitor university student reflections, questions, and interactions with Teacher Mentors
May 2011	Interview Teacher Mentors and conduct focus groups, administer open-ended questionnaire
May-June 2011	Analyze data and report findings via dissemination plan



# Budget Request for SOTL Grant

Year 2011

Joint Proposal?      X    Yes                  No

Title of Project                      Window into Teaching and Learning [WiTL]

Duration of Project                1 Year

Primary Investigator(s)        Tina Heafner & Teresa Petty

Email Address(es)                [theafner@uncc.edu](mailto:theafner@uncc.edu), [tmpetty@uncc.edu](mailto:tmpetty@uncc.edu)

UNC Charlotte SOTL Grants Previously Received (please names of project, PIs, and dates)      *Expanding Teacher Licensure through the Remote Observation of Graduate Interns; Teresa Petty, Tina Heafner & Richard Hartshorne; 2008-09*  
*Extending Comprehensive Social Studies Licensure Opportunities for Undergraduate Geography Majors; Tina Heafner; 2006-07*

Allocate operating budget to Department of                      Middle, Secondary & K-12 Education

		Year One
Account #	Award	January to June
Faculty Stipend	Transferred directly from Academic Affairs to Grantee on May 15	\$ 7700.00
911250	Graduate Student Salaries	\$3780.00
911300	Special Pay (Faculty on UNCC payroll other than Grantee)	
915000	Student Temporary Wages	
915900	Non-student Temporary Wages	
920000	Honorarium (Individual(s) not with UNCC)	\$2400.00
921150	Participant Stipends	

925000	Travel - Domestic	
926000	Travel - Foreign	
928000	Communication and/or Printing	
930000	Supplies	
942000	Computing Equipment	\$4700.00
944000	Educational Equipment	
951000	Other Current Services	
<b>GRAND TOTAL</b>		<b>\$ 18,580.00</b>

**Attachments:**

1. Attach/provide a narrative that explains how the funds requested will be used.
2. Has funding for the project been requested from other sources? \_\_\_ Yes  No. If yes, list sources.

## **Budget Narrative**

### **Window into Teaching and Learning [WiTL]**

#### **Faculty Stipend (\$7,700.00)**

A summer stipend will be paid to each of the co-PIs. Co-PIs will travel to the three participating schools to assist with technology setup, train classroom teachers in the use of the hardware and university supported videoconferencing software. In collaboration with classroom teachers, co-PIs will develop a protocol for post-teaching dialog and meaningful questions to guide systematic reflections. Additionally, expectations for asynchronous discussions and mentoring will occur with teachers in preparation for post-teaching interactions with students. Co-PIs will be present at the schools during each synchronous teaching observation to facilitate the post conference. Co-PIs will support both the classroom teachers and UNC Charlotte methods students throughout the duration of the project. Data collection and analysis are also responsibilities of the co-PIs. They will interview the classroom teachers and conduct focus group interviews with UNC Charlotte methods students at the conclusion of the project. During the summer, they will analyze the data and begin work on dissemination of the project results. A summer stipend of \$3850.00 is requested for each co-PI.

#### **Graduate Student Salary (\$3,780.00)**

The graduate assistant will work closely with the co-PIs during the Spring and Summer semesters. He/she will be responsible for accessing relevant research to inform decision making throughout the project implementation. The graduate assistant will assist in the support of classroom teaching throughout the project providing technical as well as facilitative support. This will include travel to schools. He/she will also provide support with the protected website that will house the video archives. The graduate assistant will be involved in data collection at the conclusion of the project including interviews with classroom teachers and focus groups with UNC Charlotte social studies and mathematics methods students. He/she will transcribe interviews, both individual and focus group, and provide these transcriptions to the co-PIs. The graduate assistant will work 10 hours per week for 21 weeks, at a rate of \$18.00/hour, during the combined Spring and Summer semesters.

#### **Honoraria (\$2,400.00)**

Classroom teachers will be utilized throughout the duration of this project. Their responsibilities will include: preparation and delivery of four lessons (two synchronous and two asynchronous) in their classrooms, post teaching conferences with UNCC methods students, and self reflections of their teaching (used in conjunction with asynchronous lessons). There will be 12 teachers participating in this project during the combined Spring and Summer semesters. They will each receive a \$200.00 honorarium.

## **Computing Equipment (\$4,700.00)**

### ***Webcams (\$300.00)***

Webcams will be shared at each of the three schools to facilitate the classroom observations and post conferences with UNC Charlotte methods students. These webcams will be connected to existing laptops. Three webcams will be purchased for approximately \$100.00 each.

### ***Wireless Headsets (\$400.00)***

Wireless headsets will be shared at each of the three schools to facilitate the classroom observations and post conferences with UNC Charlotte methods students. These wireless headsets allow the teacher to move around the classroom while providing quality audio. These wireless headsets will be connected to existing laptops. Co-PIs will share one wireless headset to participate in the classroom observations and post conferences. Four wireless headsets will be purchased for approximately \$100.00 each.

### ***Laptops(\$4000.00)***

Mac Books will be used by co-PIs during this project. The Mac Books provide quality video which is necessary for this project. Using Mac Books allow the co-PIs to access a different platform which is gaining popularity in school systems. Two Mac Books, one for each co-PI, will be purchased at \$2000.00 each.


## Administrative Letters of Support



Department of Middle, Secondary and K-12 Education

9201 University City Blvd, Charlotte, NC 28223-0001  
t/ 704.687.8875 f/ 704.687.6430 www.uncc.edu

### MEMORANDUM

TO: SoTL Grant Review Committee  
FROM: Warren J. DiBiase, Interim Chair MDSK   
RE: "Windows into Teaching and Learning: WiTL."  
DATE: October 22, 2010

Please accept this memorandum as a strong endorsement for the SoTL grant proposal entitled, "Windows into Teaching and Learning: WiTL." The two co-PI's on the proposal, Dr. Tina Heafner and Dr. Teresa Petty are two faculty members in my department, the Department of Middle, Secondary and K-12 Education (MDSK). Drs. Heafner and Petty have successfully collaborated on numerous projects in the past. This project is the next phase of one of their earlier collaborations; ROGI, the Remote Observation of Graduate Interns.


One of the largest programs in our department is the Master of Arts in Teaching (MAT) program. Phase I of this program is the Graduate Certificate Program (GTC). Upon completion of the GTC program teacher candidates apply for their initial licensure. As pointed out in the proposal, many of the courses in the GTC program require a clinical experience. In addition, these clinical hours must be satisfied in three diverse settings. We now offer our GTC and MAT program completely online. Enrollment in this online program has really taken off. This enrollment increase includes students who are located in counties far from the university. With the increase in this population comes the problem of how to offer a quality clinical experience. Drs. Heafner and Petty propose a solution to this problem in their WiTL proposal. Implementation of this project will provide for a pilot project to be run during spring 2011. The findings of this research will provide not only a working model but valuable insights into the issue of providing a quality clinical experience for distance education teacher candidates. As such, MDSK fully supports the funding of this proposal.



Office of the Dean  
9201 University City Blvd., Charlotte, NC 28223-0001  
(704) 687-8722, [www.uncc.edu](http://www.uncc.edu)

## MEMORANDUM

**TO:** Dr. Tina Heafner  
Dr. Teresa Petty

**FROM:** Mary Lynne Calhoun, Dean 

**DATE:** May 24, 2011

**RE:** Support for *Windows into Teaching and Learning [WiTL]* Scholarship of Teaching and Learning Proposal

Please accept this letter as my strong endorsement of your *Windows into Teaching and Learning* proposal and my best wishes for funding success.

The proposal is tightly aligned with the strategic goals of the College of Education: to recruit, prepare, and support more outstanding teachers, especially in such high need areas as high school science and mathematics. The University of North Carolina General Administration has established “teacher productivity targets” in these teaching fields for each campus of the UNC system, and our success as a university is measured in part by our effectiveness in meeting these targets. As you know, the College of Education has a strong record of attracting second career professionals into the teaching profession through graduate-level routes to the teaching license, and these graduate-level programs are contributing dramatically to our goals of preparing “more and better teachers.” The success of these programs (now enrolling over 800 students) has led to a high demand for online courses and a high demand for clinical supervision outside of the traditional service boundaries of UNC Charlotte.

Your proposal does an excellent job of identifying the four key barriers to excellent clinical instruction for adults in the graduate pathways to teaching programs: the need for clinical placements outside the traditional services boundaries of UNC Charlotte; the need for access to diverse school placements (e.g., rural, urban, suburban;) the need for flexible clinical placements for working adults; and summer access to clinical placements. The research questions framed in your proposal – What are the options for clinical experiences in online learning? Are there technology mediated alternatives to school-based clinicals? – hold promise of discovering good solutions to these dilemmas. It is my assessment that your work is innovative and shows promise of becoming a regional and national model for effective non-traditional clinical education in teacher education.

I look forward to following the work of this innovative project. Let me know how I can help.