Remote Classroom Observations with Preservice Teachers

Pamela D. Wash: Winthrop University
Gary Bradley: University of South Carolina Upstate
Judy Beck: University of South Carolina Upstate

According to O'Brien, Aguinaga, Hines, and Hartsborne (2011), "Delivery of course content via various distance education technologies (e.g., interactive video, asynchronous and/or synchronous online delivery) is becoming an accepted and expected component of many teacher preparation programs" (p. 3). With the infusion of technology in K-16 classrooms, including one-to-one computing and bring your own device (BYOD) initiatives, university teacher preparation institutions are piloting the use of Web 2.0 tools such as Skype and FaceTime to conduct remote clinical observations. This article provides the research data of a pilot study conducted with middle level and secondary education preservice teachers regarding the effectiveness of remote classroom observations.

Introduction/Rationale

In South Carolina, all preservice teachers are required by the S.C. Department of Education to complete a minimum of 100 hours of K-12 classroom clinical experience prior to their penultimate directed teaching (also referred to as student teaching) experience that consists of a minimum of 60 consecutive days (S.C. Department of Education, 2007). Therefore, faculty are stretched thin scheduling and traveling to surrounding schools to conduct face-to-face classroom observations for each student with some clinical levels requiring multiple observations. Additionally, students are attempting to juggle the teaching schedule of their assigned cooperating teacher's classroom with that of the faculty member as well as the other students in the clinical course making this a scheduling dance among all participants.

To potentially alleviate some of the scheduling issues resulting from the sheer number of preservice clinical students assigned to faculty each semester as well as the associated expenditures, the idea of employing the combination of Web 2.0 tools such as Skype and FaceTime, along with webcams to conduct live clinical observations was conceived.

Literature Review

In order to ground this pilot research project, the use of Web 2.0 tools such as Skype, as well as any research conducted on remote clinical observations was explored. In this quest for current literature, the researchers yielded numerous publications regarding the use of Skype and its ease for two-way communication, but limited research related to remote clinical observations making the case for this study timely and relevant to the current body of knowledge in this field.

Dyke, Harding, and Liddon (2008) in their research study regarding the effectiveness of

remote clinical observations as published in their manuscript, "How Can Online Observation Support the Assessment and Feedback on Classroom Performance, to Trainee Teachers at a Distance and in Real Time?" reported that synchronous online observations were comparable to face-to-face observations. Additionally, they reported that this is a viable alternative to face-to-face observations where the observer's overt presence can be deemed as intimating while the onscreen observer is seen more positively. These conclusions were drawn after conducting 25 synchronous observations and comparing the observer notes with those of 25 in-class observational notes.

In the article, Creating Strategies for Improved Teaching and Learning (2005), O'Connell and Phye reported that the advantages to remote site observations included a reduction in travel time and costs, and an increase in the number of observations conducted each day. The disadvantages they reported included camera placement (e.g. being out of view) and the inability to interact with the inservice teachers immediately following the observation. In this particular project, the authors conducted on-site professional development to practicing teachers in local schools and then followed up the training with remote observations.

Rock, Zigmond, Gregg, and Gable (2011) conducted a study on virtual coaching with practicing teachers. Real-time instructional coaches were remotely engaged with the teacher as a lesson unfolded in his/her classroom that used a webcam, Skype, computer, and a wireless ear piece. This study yielded that the teacher's effectiveness improved, but more importantly, the skills demonstrated by the students increased from 54% to 74%.

The most recent use of remote observations was conducted by Hager, Baird, and Spriggs (2012) from the University of Kentucky. Three separate units on this campus joined together to pilot and test the feasibility of using Microsoft Office Communicator®. This program works similarly to Skype, but is the same system their faculty and students use for email that also enables instant messaging, screen sharing, as well as web conferencing. While no data was provided for this article, it does serve as a guide for replication at other institutions.

Skype can be used for a variety of purposes. Some of which include having a conversation with a friend or family member that lives a distance away, connecting to a classroom in another state or country, inviting authors to speak to the class virtually, sharing a computer screen with others, and many more. Teachers can use Skype to venture out beyond the walls of the classroom into new territories. According to Eaton, "Skype's simplicity, on the other hand, makes it an accessible tool for those who are less comfortable using technology in the classroom - and it is free" (Eaton, 2010).

In Using Skype in the Classroom (2008), Mirtschin, an information technology teacher from Australia, discusses the author's class views on the use of Skype as a powerful experience. The use of a virtual classroom is where she feels education is moving. The article mentions that discipline can be a distraction and instruction should be limited to a small group of students. The limitations noted by the author included that bandwidth could create unstable connections; Skype could potentially be blocked in some educational institutions; and that if more than two remote connections/participants are needed, the video option is not always reliable.

Research Questions

Observing clinical students, looking beyond the aspects of scheduling, involves providing written feedback to the student that is collected during the face-to-face observation while the clinical student is teaching and interacting with K-12 students. Some students have reported that

having a faculty member show up, sit down in the classroom, and consistently write and/or type during a lesson can be intimidating. Therefore, using the factors of scheduling as well as the face-to-face factors mentioned by students, the following three research questions were designed for this pilot study:

1. Is there a perceived anxiety difference between remote clinical observations and face-to-face clinical observations?
2. Is there a perceived difference between observer feedback from remote clinical observations and face-to-face clinical observations?
3. Is there a perceived convenience factor between remote clinical observations and face-to-face clinical observations?

Methodology-Design Protocol

To begin the pilot study, the principle investigator elicited participation from a full-time faculty member in the school of education middle level and secondary education program that is the instructor of record for a Block III clinical course that serves each of the seven middle level and secondary education degree programs provided at this South Carolina-based institution. Beginning late spring 2013 semester, the faculty member was trained on how to use Skype on a laptop and FaceTime on the iPad as well as how to set up the provided webcams for use with Skype. The faculty member was provided six webcams; one for his use and five to loan to participating clinical students.

When classes officially began for the fall 2013 semester, the faculty member elicited participation (convenience sample) from his assigned clinical students (N=46). Out of the 46 clinical students, 22 volunteered to participate; however, 11 of the 24 were denied the use of this technology by their host schools, and the remaining 24 clinical students elected to continue with direct observations. An informed consent form was provided in detail to the eleven clinical students for their signatures prior to the beginning of the observations. Each participant was provided access to webcams as well as training on how to set up Skype in their host teacher's classroom or how to connect using FaceTime on his/her iPad. Following the initial setup of the Web 2.0 tools on the school computers and/or FaceTime enabled devices, each student then arranged an initial "trial observation" to ensure that all technologies were working properly and to troubleshoot if needed.

Having established the means to conduct the live clinical observations between the faculty member and corresponding clinical students, a minimum of one remote observation was conducted with each of the eleven participants. The established School of Education protocol for observing clinical students was followed, which included the completion of a clinical observation form. This form is correlated to the six ADEPT (2006) (Assisting, Developing, and Evaluating Professional Teaching) performance standards that are considered "observable" and contains attributes pertaining to exemplary teaching associated with each of the performance standards (State Department of South Carolina, 2006).

At the end of the fall semester, the participating clinical students were provided a survey for completion. This instrument contained demographic information regarding the student's class rank, major, and clinical level as well as six Likert-scale questions and four open-response questions (see Appendix A). All completed surveys and lesson observation forms were returned to the principal investigator for analyses.

Data Analysis

To analyze the results of using remote technology to conduct live clinical observations, both quantitative and qualitative data analysis means were employed. All survey Likert-scale

responses were entered into SPSS 21.0.0, IBM statistical analysis software, and analyzed for mean, range, and potential correlation data in an attempt to determine statistical significance. All open response survey data were analyzed using a typology approach (Lofland & Lofland, 1995) which is a taxonomy approach to determining if themes exist and identifying those themes.

Results

Is there a perceived anxiety difference between remote clinical observations and face-to-face clinical observations? After comparing the mean scores (see Table 1) from both the middle level (n=4) and secondary education (n=7) clinical student surveys of each of the six Likert-scale survey questions, the results yielded that 81% of the eleven participating clinical students believe that their anxiety level decreased when using technology for remote observation. Several comments from the participants included that it allowed them to teach to the students and not to the observer, that it was convenient and easy, and that it was easy for them to forget that they were being observed.

Is there a perceived difference between observer feedback from remote clinical observations and face-to-face clinical observations? Ninety-one percent agreed or strongly agreed that feedback from the instructor was detailed. The response mean for the eleven participants was 3.18 on a 4-point scale indicating that the clinical students felt that the observer feedback was as detailed as they had received with traditional face-to-face observations. Similarly, 91% agreed or strongly agreed that the remote observations were convenient citing that it was easier to schedule the instructor therefore, addressing and confirming the research question, Is there a perceived convenience factor between remote clinical observations and face-to-face clinical observations?

Lastly, only two of the eleven respondents (19%) agreed that the webcam and/or technology were a distraction to their students, indicating that 81% believed this form of observation worked well in the classroom.

The remaining survey data captured provided additional insight into the results of this pilot study regarding the overall effectiveness of remote observations with preservice teachers. Ten of the eleven respondents agreed or strongly agreed that remote observations modeled positive real world integration of technology. All of the respondents agreed or strongly agreed (100%) that they preferred remote technology for their clinical observations.

The eleven clinical student participants were posed the open-ended question, Describe any positive outcomes as a result of using technology for remote clinical observations. Eight of the eleven or 73% stated that they felt the remote observation allowed them to feel more relaxed and able to focus on teaching their lesson. Ninety-one percent of the students responded positively when asked, Do you feel that remote observation is an effective medium to use to observe clinical lessons? Only one of the respondents stated that they would not recommend remote observation to their peers.

As an extension to this pilot study on remote observations, an open-ended survey was administered to the students who did not volunteer to be remotely observed. Fifty-one percent of these students said they felt comfortable with their decision to not be remotely observed. Thirty-one percent said that they would have chosen to be remotely observed had barriers not been in place and 17% were comfortable with either direct or remote observation. The reasons most frequently stated by the non-participants were lack of confidence in the technology and concerns the webcam could not capture the full essence of what was really happening in the classroom. Responses such as, “I didn’t like trying

to figure out the webcam," and "I was afraid that the technology would fail during the session," reflected the concerns that several students had with remote technology. One student said that, "I felt that [the researcher] needed to be present in the classroom to see these struggles, behavior problems, and to understand why I did some of the things I did."

Research Limitations/Future Research

Three of the five school districts that served as host schools for the 46 clinical students in this study had Internet access bans on Skype and FaceTime through the use of their Wi-Fi filters. This policy prohibited 24% of the 46 potential clinical participants from participating in the study. As part of the researchers' protocol, emails, phone calls and a letter of intent were provided to the principals and teachers as well as direct communication to each District Superintendent by the Dean of the School of Education. These forms of communication outlined the research study, stressed the importance that no video capture would be used, and assured that only the faculty clinical supervisor would be viewing the observation. The general response of the teachers and principals affiliated with the banned schools was that they would rather not take the chance of broadcasting a student's image outside the classroom. Although several district leaders have approved remote observation, more work still needs to be done to communicate this policy throughout each system.

Conclusions

Remote observation, according to the pilot results, can be used to lower student anxiety in a classroom observation setting, offers comparable detailed feedback to the clinical student, as well as offers scheduling relief to stretched faculty traveling to multiple schools to conduct direct observations and clinical students juggling class schedules and that of the host teacher. Additional extension data provided by 24% of the non-participants in the same cohort of clinical students stated that they would have chosen the remote observation option if their host schools agreed.

John Dewey said it best, "If we teach today as we taught yesterday, we rob our children of tomorrow", (1916). As technology continues to expand and advance, it is imperative that higher education seek ways to take full advantage of the efficiency technology offers. Remote preservice teacher clinical observations are one such way to meet the needs of both students and faculty.

References

Dewey, J. (1916). Democracy and education: An introduction to the philosophy of education. NY: Freepress.

Dyke, M., Harding, A., & Liddon, S. (2008). How can online observation support the assessment and feedback, on classroom performance, to trainee teachers at a distance and in real time? Journal of Further and Higher Education, 32(1), 37-46.

Eaton, S. E. (2010). How to use skype in the esl/ell classroom. The Internet TESL Journal, XVI(11). Retrieved from http://iteslj.org/Techniques/Eaton-UsingSkype.html

Hager, K. D., Baird, C. M., & Spriggs, A. D. (2012). Remote teacher observation at the University of Kentucky. Rural Special Education Quarterly, 31(4), 3-8.

Lofland, J., & Lofland, L. (1995). Analyzing social settings (3rd ed). Belmont, CA: Wadsworth.

Mirtschin, A. (2008). Using skype in the classroom. Retrieved from http://murcha.wordpress.com/2008/12/06/using-Skype-in-education/

O'Brien, C. Aguinaga, N., Hines, R., & Hartsborne, R. (2011). Using contemporary technology tools to improve the effectiveness of teacher educators in special education. Rural Special Education Quarterly, 20(3), 33-40.

O'Connell, J., & Phye, G. (2005).Creating strategies for improved teaching and learning. THE Journal, 32(12), 26-29.
Rock, M. L., Zigmond, N. P., Gregg, M., & Gable, R.A. (2011). The power of virtual coaching. Educational Leadership, 69(2), 42-47.
State Department of South Carolina. (2007). Policy guidelines for south carolina educator preparation units. Retrieved from http://ed.sc.gov/agency/programs-services/50/documents/EducatorPreparationGuidelines.pdf
State Department of South Carolina. (2006). ADEPT performance standards for classroom-based teachers. Retrieved from http://www.ed.sc.gov/agency/programs-services/50/documents/ADEPTStandards.pdf

Authors' Note:

Dr. Pamela D. Wash is an associate professor in the College of Education at Winthrop University and serves as the Department Chair of Counseling, Leadership, and Educational Studies. Her research interests include science education and instructional technology.

Dr. Gary Bradley is an Assistant Professor in the School of Education at the University of South Carolina Upstate. His research interests are in science and math education and instructional technology.

Dr. Judy Beck is a Professor in the School of Education at the University of South Carolina Upstate Greenville Campus. She serves as the Director of Teacher Education on the Greenville campus and her research interests are in science education.

Tables

Table 1: Remote Observation Mean Data

Survey Question:	Middle Level Preservice Teacher Responses: N=4	Secondary Preservice Teacher Responses: N=7	Overall Mean N=11
My anxiety level decreased when using remote technology for my observation(s).	3.40	3.17	3.27
Remote observations were more convenient for me.	3.20	3.17	3.18
Feedback (from instructor) for my remote clinical observation(s) was detailed.	3.40	3.50	3.45
My clinical students were distracted by the technology during my observation(s).	2.40	2.00	2.09
Using the remote technology in my clinical modeled positive real world integration of technology	3.40	3.17	3.40
I prefer remote observations for my clinical observations.	3.20	3.17	3.27

Appendix A

Using Webcams for Clinical Observations

Please respond honestly to the following questions:

Major: Art ECE ELEM Sp.Ed. PE Middle Level: Areas: _____/_____ Secondary: Area: _____

Clinical Course Level: I II III Student Teaching

Please circle one response for each of the items below.

Strongly Agree	SA
Agree	A
Disagree	D
Strongly Disagree	SD

1. My anxiety level decreased when using remote technology for my observation(s).	SA	A	D	SD
2. Remote observations were more convenient for me.	SA	A	D	SD
3. Feedback (from instructor) for my remote clinical observation(s) was detailed.	SA	A	D	SD
4. My clinical students were distracted by the technology during my observation(s).	SA	A	D	SD
5. Using the remote technology in my clinical modeled positive real world integration of technology.	SA	A	D	SD
6. I prefer remote observations for my clinical observations.	SA	A	D	SD

Short Answer (use the back if necessary):

7. Briefly describe any positive outcomes as a result of using remote technology for clinical observations.
8. Briefly describe any challenges encountered as a result of using remote technology for clinical observations.
9. Do you feel that this is an effective medium to use to observe clinical lessons? Explain why/why not.
10. Would you recommend this to other candidates?