

# Web Conferencing with Distant Alternate Certificate Student Teachers

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## Abstract

Many alternative routes to certification in special education serving rural populations incorporate distance-learning technology. Participants in these programs may feel isolated because they do not regularly travel to campus to attend courses or meet with their instructors. This article describes a strategy in which regularly scheduled individual video conferences were held between the instructor and five distant student teachers enrolled in an alternate certificate program. Results of a questionnaire completed by the student teachers are presented, along with descriptive statistics of the conferences and a description of the benefits for the course instructor.

Alternative routes to certification are becoming more common as means to special education certification across the nation (Wasburn-Moses & Rosenberg, 2008), and the use of technology has been crucial in efforts to make special education certification programs available to a wider audience, particularly in rural areas. For example, Collins, Baird, and Hager (2009) described two decades of evolution in the moderate and severe disabilities (MSD) distance education program at the University of Kentucky (UK). Approximately 100 students have earned certification in MSD through the alternate certificate program, and others have earned master's degrees or rank changes through UK's distance programs in special education, the majority teaching in rural districts in Kentucky (B. C. Collins, personal communication, January 24, 2010). Technology increasingly plays a role in supporting students in alternative routes to certification as universities incorporate technology as an integral component in teacher preparation programs. Technology often is relied upon for course delivery (e.g., Jung, Galyon-Keramidas, Collins, & Ludlow, 2006; Ludlow, Galyon-Keramidas, & Landers, 2007; Spooner, Knight, Lo, & Wood, 2007), but also is used for direct supervision (e.g., Falconer & Lignugaris/Kraft, 2002). Rosenberg, Boyer, Sindelar, and Misra (2007) identified over 200 alternative routes to certification in 35 states. They obtained survey responses from 101 of these programs and reported that 68% use distance education formats for delivering instructional content.

Even as alternative routes to certification continue to proliferate, Wasburn-Moses and Rosenberg (2008) acknowledged that currently there is not an adequate research base to guide the development of these programs. Based on the limited research available, however, they provided seven guidelines for the development of an alternative route to certification in special education. One guideline advocated the integration of technology into instruction. As noted

above, it is common for alternative routes to certification to include the use of distance education, which, by its very nature, means incorporating some type of technology. Wasburn-Moses and Rosenberg indicated that the use of technology should be integrated into program activities so that the teacher candidates must actually use it. One example they provided was to use technology to support the development of relationships, such as those between teacher candidates and mentors.

One example of integrating technology into preparation programs is using web-based conferencing to support interactions between instructors and students, as well as between students. Pattillo (2007) investigated the use of web-based voice conferencing (no video) for small group discussions in an on-line course in a nursing program. Students reported that the conferences significantly enhanced the course and that they were more likely to discuss course-related concepts with their classmates due to the small group conference format. Dudding (2009) described the use of video conferences in communication sciences and disorders training programs in which it has been successfully applied to supervision in off-campus clinical placements. Dudding suggested using video conferencing could allow supervision in rural areas where providing such services may not otherwise be possible.

The MSD program at UK delivers certification coursework through interactive video to alternate certificate students in rural school districts across the state. All students in the program must have a bachelor's degree prior to entering the program and are required to teach full-time in a classroom for students with MSD while they complete the coursework required for certification. University supervisors travel to the schools in which they are employed an average of three times per semester for the four semesters the students spend taking coursework. The university supervisors spend approximately half a day per visit and provide extensive written feedback to the alternate

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certificate students. Most of these students work in very small schools in rural areas, and the alternate certificate student may be the only MSD teacher in the school or even the district. Due to the distance of these schools from campus (up to 150 miles, one-way), it is not feasible to provide more on-site supervision; yet the students reported that they needed more support. The need to provide more support to alternate certificate students led to the development of the system of individual web conferences described in this article. The purpose of this study was to investigate the effect of web conferencing on MSD alternate certificate student teachers' successful completion of student teaching requirements and the acceptability of this strategy to the alternate certificate student teachers.

## Methods

### *Participants*

Five students in the MSD alternate certificate program participated in this study during their first semester of student teaching. All students were non-traditional in that they already had completed a bachelor's degree before entering the MSD Alternate Certificate program. In order to be accepted into the program, students must be hired on an emergency certificate to teach in a classroom for students with moderate to severe cognitive disabilities. By the time they student teach, they typically have been in their classrooms for one calendar year.

Jordan had a cumulative GPA of 4.0 in the alternate certificate program and taught in a rural elementary school. Her undergraduate degree was in business administration. Michelle had a cumulative GPA of 3.9 in the alternate certificate program and also taught in a rural elementary school. Her undergraduate degree was in business administration/accounting. Lisa had a cumulative GPA of 3.6 in the alternate certificate program and taught in a medium-sized middle school. Her undergraduate degree was in special education—learning and behavior disorders. Wade and Gary taught different classrooms in the same medium-sized high school. Wade's undergraduate degree was in kinesiology, and he had a cumulative GPA of 3.3 in the alternate certificate program; Gary's undergraduate degree was in communication and media studies, and his GPA was 3.4.

### *Setting*

The participants taught in schools across Kentucky. The MSD alternate certificate program currently serves students up to 150 miles from the UK campus. I conducted all conferences via Skype so the student teachers were in their classrooms and/or homes during the conferences. I conducted the conferences both from my campus office and my home, depending on when they were scheduled.

### *Equipment*

I checked out and mailed Logitech webcams to all student teachers at the beginning of the semester. I instructed the students to install them on the computer they planned to use for the web conferences. I also checked out and mailed a MotivAider© (Behavioral Dynamics; an electronic device that vibrates on a fixed or variable schedule) to each student. The MotivAider© was not used during the web conferences, but I often directed the student teachers to use it to help resolve an issue they were facing in the classroom (e.g., insufficient praise rate, insufficient data collection).

### *Procedures*

**General procedures.** Participating in web conferences is a course requirement for student teachers in the alternate certificate program. The requirements are detailed in the course syllabus, as they are for all student teaching assignments. At the beginning of the semester, all students were informed of the course assignment and invited to participate in a research study investigating the use of web conferences. They were informed that they would complete the exact same assignment requirements whether or not they chose to participate in the study. If they volunteered to participate in the study, they would complete a written questionnaire via email at the end of the semester. They were informed that I (course instructor) would not read the questionnaire responses until after grades were submitted for the semester.

**Web conference assignment requirements.** I directed student teachers to complete the following steps to prepare for the web conferences (see Figure 1 for assignment sheet):

1. Download and test a web conferencing program.
2. Schedule the web conferences with the course instructor at a mutually agreeable time.
3. Participate in a minimum of six web conferences during the course of the semester.
4. The day before the conference, email an agenda for the conference to the course instructor.
5. The day after the conference, email a list of action items to be completed before the next conference.

Student teachers in the MSD certificate programs at UK receive a letter grade for student teaching; thus, all assignments have an identified point value. The web conferences were worth up to 10 points each, for a total of 60 points (approximately 6% of the total points possible for student teaching).

**Questionnaire.** At the end of the semester, I emailed a questionnaire to the student teachers. It consisted of 11 statements that the student teachers rated using a 5-point Likert-type scale, 2 open-end

questions, and an additional comments section. See Figure 2 for the questionnaire items. The student teachers completed the questionnaire and returned it via email. I placed the questionnaires in an electronic file and did not access them until the semester was over and student teaching grades had been submitted.

## Results and Discussion

### *Web Conference Descriptive Data*

Conferences averaged 28 min. across all participants, with a range of 4 min. to 46.5 min. (data collected from the *history* tool on Skype). The 4-min. conference was the last one a student made at the end of the semester to check that all materials had been received. The average call length for individual students ranged from 19 min. to 39 min. Three participants completed the six required conferences, and two participants completed only four conferences. The average number of agenda items across all students and all conferences was 3.27, with a range of 1 to 5 items per conference.

### *Agendas*

I required the student teachers to submit an agenda the day before the scheduled web conference, and compliance with this requirement was 100%. There were several reasons for requiring the agendas: (a) to encourage the student teachers to plan for the web conferences and take them seriously, (b) to support more efficient meetings, and (c) to provide the student teachers with an opportunity to practice a skill they will need for organizing other meetings, such as IEP meetings. Potential agenda items suggested to the student teachers included general questions addressing course/assignment requirements; reviewing their instructional and behavioral programs, analyzing data, making data-based decisions; and discussing day-to-day issues they faced in their classrooms, such as scheduling, managing behavior, and working with paraprofessionals. Once I received the agenda, I emailed back any additional items to add to the agenda.

General categories of items submitted were similar across student teachers and included instruction, data collection, and graphing procedures and questions on scheduling, IEPs, alternate portfolios, and course requirements; however, the specific questions and issues varied. The following are examples of agenda items:

- Number of trials per session for sight word program
- Productive engagement of all students during group instruction
- Data collection on handwriting
- Identification of a response prompting system for dressing
- Toilet training

- Writing of present levels of educational performance
- Development of IEP goals for a new student
- Graphing of student data from specific prompting procedures
- Transition meetings
- Peer tutors
- Self-injurious behavior
- Community-based instruction

The following example is an agenda submitted by one student teacher:

- Home-bound instruction
- Student dieting and exercise plan
- Para-educators schedules
- Peer tutors
- PRAXIS exam

### *Action Lists*

The day after the web conference, I required the student teachers to submit an action list consisting of items discussed during the web conference that required follow-up. Compliance with this requirement was 100% for three participants and the other two consistently submitted the action list with the agenda for the next conference. The following example is an action list submitted by one student teacher:

1. I will assess (student name) on coin names and values to determine which ones he knows fluently.
2. I am going to review the System of Most to Least Prompts in the textbook and use this prompting system to work with (student name).
3. I will administer the *Dunn-Ranking Reward Preference Inventory* to (student name).
4. I will review the System of Least Prompts in the textbook as well, and use it for instructional program 4.
5. I will continue my assessment project on (student name) by doing ecological inventories in the sub-environments of the regular ed class and the cafeteria.

### *Questionnaire*

I emailed the questionnaire to the students at the end of the semester to be returned via email. I did not read the responses until the semester was over and course grades had been submitted. The questionnaire consisted of 11 statements for the student teachers to rate on the following 5-point Likert-type scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. The 11 statements, along with average and range of responses for each, are presented below.

1. I enjoyed participating in the webcam conferences ( $\bar{x}$  = 4.2, range = 3-5).

2. I was always prepared for the webcam conferences ( $\bar{x} = 4.6$ , range = 4-5).
3. The webcam conferences were important in helping me complete the requirements of this course ( $\bar{x} = 4.2$ , range = 3-5).
4. We followed the agenda during the webcam conferences ( $\bar{x} = 4.6$ , range = 4-5).
5. Time spent preparing the agenda was well spent ( $\bar{x} = 4.6$ , range = 4-5).
6. I always completed the items on my action list ( $\bar{x} = 4.2$ , range = 3-5).
7. The length of the webcam conferences was appropriate for the content we needed to cover ( $\bar{x} = 4.6$ , range = 4-5).
8. More than six webcam conferences should be required ( $\bar{x} = 1.8$ , range = 1-2).
9. Fewer than six webcam conferences should be required ( $\bar{x} = 3.4$ , range = 2-5).
10. Participating in webcam conferences should be optional ( $\bar{x} = 2$ , range = 1-3).
11. Webcam conferences should be required during practicum ( $\bar{x} = 3.4$ , range = 2-4).

Overall, the participant responses were positive. As indicated above, students consistently stated that they were prepared for conferences, the time was well spent, and the conferences were helpful in fulfilling student teaching requirements. They agreed that the conferences should be required but varied regarding the number of conferences that should be required and whether they also should be required in earlier practica.

In addition to the 11 statements above, the questionnaire contained two open-response items and a place for additional comments. The first open-response item was as follows: *Describe how the webcam conferences helped you successfully complete your student teaching. Please provide examples of components of the conferences that helped you with specific course assignments and classroom responsibilities.* All five participants responded to this question. Responses included the following:

"The web conferences were very helpful because while I was implementing certain programs or procedures my instructor was available to help me make decisions and answer questions."

"The webcam conferences helped me successfully complete my student teaching by providing interactive assistance for instructional programs and behavior plans . . . An email would have worked but the web conference was much easier to discuss options."

The second open-response item was as follows: *Identify changes that you feel would improve the web conferences.* Four participants responded to this item. Responses included the following:

"One change I would make is to lessen the number of required conferences. By the end of the semester, I was struggling to come up with topics that I felt were important enough to talk about."

"There are no changes that I would have made. The agenda and action items were important for both the instructor and the student to be on the same page and stay on topic."

Finally, there was a section for any additional comments the respondents wanted to provide. Two participants responded with additional comments:

"Being new to the profession, I really liked having access to someone that could help me when I had a problem. Just hearing someone else's ideas was a real plus. There are no other MSD teachers at my school. Therefore, there is no one to bounce ideas off of. I think we should keep the webcams even after student teaching is over so we can conference any time (ha. ha.)."

"The web conference is a great idea for teachers to ask questions and receive feedback about classroom management and instructional programs. The 6 required conferences were hard to meet due to busy schedules."

### *Instructor Time*

The time commitment for me, as the course instructor, was minimized because much of the responsibility for the web conferences was placed on the students' shoulders. Students were responsible for scheduling the conferences, developing the agenda before the conferences, and developing the action list of follow-up items after the conferences. In addition to the time actually spent in conference, I spent approximately 5-10 min. per conference responding to scheduling emails, reading agendas and submitting additional items, and reviewing the action lists. For the reasonable time commitment, I (a) gained a much clearer understanding of what the alternate certificate students were doing in their classrooms, (b) was able to redirect students as necessary as they developed instructional and behavioral programs and made data-based decisions, (c) received portfolios that contained higher-quality materials (due to feedback throughout the semester), and (d) was able to provide timely feedback on day-to-day challenges faced by my alternate certificate students.

### *Equipment and Technical Issues*

I provided all students with a Logitech web camera that cost approximately \$30.00 each and used Skype, which is a free download for video conferencing. I told the student teachers they could use any free video conferencing software they would like, but all chose Skype. All students had computers in their classroom, although some chose to conduct the conferences from home on their personal computers.

Surprisingly little time was spent addressing technical issues even though the students in the alternate certificate program are non-traditional and experience using technology could not be assumed. No student requested support to install the web camera or to download the conferencing software. Some worked in schools where only the technical support staff are allowed to install equipment or software; thus, they had access to a technician to install the equipment and software. Most, however, did so themselves. Lisa needed some minimal support during the first couple of conferences. For example, I used the instant message feature to walk her through the steps of checking her settings to be sure the audio was correctly set. Finally, even though some students were located in very rural areas of Kentucky, all had adequate Internet access to conduct the web conferences.

### *Limitations*

Students participating in alternate routes to certification via distance education programs are a diverse group, so it is not possible to generalize from this small group of five participants to students in other distance education programs. The positive response of the students to participating in the web conferences, however, suggest it is an effective strategy to support beginning teachers, particularly those in rural areas. Another limitation is the potential that participants responded positively on the questionnaire because the

researcher was also their instructor and was responsible for their student teaching grade. In order to lessen this influence, I did not access the questionnaires until after grades were submitted. In addition, the following anecdotal information suggests the students sincerely felt the web conferences were helpful. Students in this program complete two semesters of student teaching. The web conferences were required for the first semester but optional for the second semester. The two participants who have completed student teaching both opted to conduct web conferences throughout their final semester when they were optional. The others have just begun their second semester.

### **Conclusion**

The use of individual web conferences with student teachers has been a positive addition to the MSD alternate certificate program. The cost, both in terms of equipment and instructor time, was minimal compared to the benefits. Benefits for the instructor included obtaining a more complete picture of the student teachers' classrooms and for the student teachers included receiving more timely support for the challenges they faced in their classrooms. Some changes are anticipated based on student feedback (e.g., decrease the required number of conferences, consider requiring them in the practicum that precedes student teaching), but they will continue to be a required assignment for the distant alternate certificate student teachers.

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**Figure 1. Web conference assignment sheet.**

## Web Conferences with Course Instructor

### Objectives:

1. Provide the alternate certification student an opportunity to clarify course requirements and assignments.
2. Provide the alternate certification student an opportunity to discuss and problem solve day-to-day issues encountered in his/her classroom.
3. Provide the instructor an opportunity to review and provide feedback regarding academic and behavioral programs the alternate certification student is implementing in his/her classroom.

### Procedures:

1. By the end of the second week of the semester, arrange a mutually agreeable time with the course instructor to conduct the webcam conferences.
2. Download and test a mutually agreed upon conference program (e.g., Windows Messenger, Skype). A webcam may be checked out from the course instructor if necessary and returned with the student teaching portfolio at the conclusion of student teaching (no grade will be submitted until the webcam is returned).
3. Participate in a minimum of six conferences across the semester (additional conferences may be scheduled at the request of either the student teacher or the course instructor).
4. The day before each scheduled conference, email the course instructor an agenda for the conference. Appropriate agenda items include (but are not limited to):
  - a. Housekeeping details/questions regarding course requirements/assignments
  - b. Reviewing instructional/behavioral programs, analyzing data, identifying data-based instructional decisions
  - c. Discussing current issues in the classroom (e.g., scheduling, behavior management, collaboration with related service providers and/or general education teachers)
  - d. Course instructor items (they will be emailed upon receipt of the agenda)
5. The day after each conference, email list of action items to be addressed prior to the next conference.

*Evaluation: The conferences are worth 10 points each, for a total of 60 points.*

Component	Points
Developed and emailed relevant agendas	/1
Actively participated in conferences	/4
Emailed list of action items	/1
Incorporated feedback from conferences/completed action items	/4
Total	/10

**Figure 2. Web conference questionnaire.**

## Webcam Conferences Study Questionnaire

Name: \_\_\_\_\_

Student teaching placement: \_\_\_ Elementary school \_\_\_ Middle school \_\_\_ High school

Please rate the statements below using the following scale (type the number after each statement):

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

1. I enjoyed participating in the webcam conferences. \_\_\_\_\_
2. I was always prepared for the webcam conferences. \_\_\_\_\_
3. The webcam conferences were important in helping me complete the requirements of this course. \_\_\_\_\_
4. We followed the agenda during the webcam conferences. \_\_\_\_\_
5. Time spent preparing the agenda was well spent. \_\_\_\_\_
6. I always completed the items on my action list. \_\_\_\_\_
7. The length of the webcam conferences was appropriate for the content we needed to cover. \_\_\_\_\_
8. More than six webcam conferences should be required. \_\_\_\_\_
9. Fewer than six webcam conferences should be required. \_\_\_\_\_
10. Participating in webcam conferences should be optional. \_\_\_\_\_
11. Webcam conferences should be required during practicum. \_\_\_\_\_

Please respond to the following.

1. Describe how the webcam conferences helped you successfully complete your student teaching. Please provide examples of components of the conferences that helped you with specific course assignments and classroom responsibilities.
2. Identify changes that you feel would improve the webcam conferences.
3. Comments:

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